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ORIGINAL ARTICLES.

A METHOD OF DETERMINING AMETROPIA BY PRISMATIC REFRACTION.*

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About four years ago this subject first occurred to me, and I have at intervals been engaged with it up to the present time. I venture to believe I can present the instrument to the profession as an accurate one to decide quickly what glasses are required in hypermetropia, myopia, and in astigmatism. It does not concern presbyopia.

The problem is to utilize the refraction of a single prism in determining the glasses required. To illustrate, Fig. 1 is necessary. Let *a* represent a normal eye, placed behind an aperture in the diaphragm *b*; and *d* the base of a glass prism, its apex toward *c*, the truncated apex covering one-half of the said aperture. Let *f* be a circle placed in the axial line *f g*, and *g* the projection of said circle upon the retina. Through the aid of parallel rays of light the true image, *f*, is impressed upon the retina at *g*, and thus *f* is seen without the aid of the prism. But a portion of the rays from *f* are oblique, and reach the prism in the dotted line *f i*; these are refracted towards the base *d* of the prism at *l*, and passing onward through the aperture reach the retina at *m*, and returning from *m* to *l* in the same course they entered the eye and prism. They will appear to be refracted, by a well-known law, from *i* to *n*, or in the angle of deviation of the prism. The circle *n* is, therefore, the counterpart of *m*, and it is the false image of *f*. The refracting power of the prism is so arranged, that at a given distance of the prism from the true circle *f* the inner margins of the true (*f*) and false (*n*) circles shall be tangent in the normal eye. It follows that if the eye be hyperopic these images will be seen apart, and if myopic they will be lapped. If now, in hyperopia, we place the proper convex glass at *o*, and covering the aperture, the images will be rendered tangent; and in the case of myopia, a suitable concave glass at the same point, the lapped images will be rendered tangent. Thus, the glass applied is the measure of the ametropia. The distance from *l* to *f* is fixed. The patient has only to say are the images apart or lapped, and when they become tangent.

The prism is fixed to the diaphragm permanently, and the latter revolves in its plane, so that the prism becomes the measure of the ametropia of any meridian, and hence astigmatism is determined by revolving the diaphragm. If all the meridians are lapped or apart, and the corrective glass be applied, as at *o*,

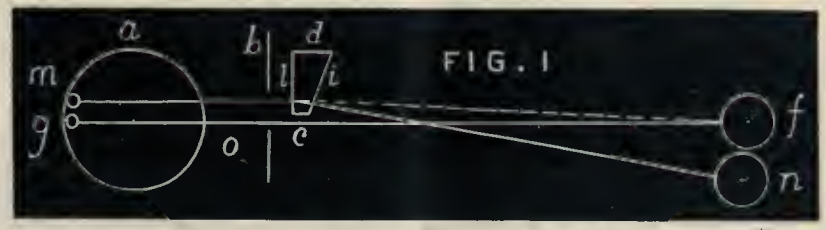

Fig. 1.

Fig. 1, the circles will touch at each meridian as the prism is being revolved, and hence in such a case there is no astigmatism, but simple general myopia or hyperopia.

By such a plan the proper glasses can be selected in a few moments, and the result verified by applying the same in the reading of Snellen's test-types.

The construction of the instrument is as follows. (See Fig. 2.)

Figure 2 represents the back surface of the eye-piece. The disc A revolves on its axis. To this disc is secured by clips a prism, the thin edge of which cuts the central opening F obliquely at an angle of 45°, in its diameter. The portion of brass wire, represented at E, is an index which denotes the degrees of the scale, shown on the back surface of the eye-piece, fig. 2. This index also denotes the *particular meridian* under observation; for with this instrument only one meridian of the eye is examined, and each meridian is tested as the index is turned from 90° to 0°, on the right or on the left side of the vertical meridian, fig. 2. The object of the oblique edge of the prism is to prevent the lateral

*This article was originally published in the Cincinnati *Lancet and Clinic*, January 20, 1883. It appears here as several modifications and improvements have been made in the instrument.

FIG. 2.

BACK SURFACE OF EYE-PIECE.

motion of the head of the observer, causing a variation in the position of the false image and thus falsifying the test.

The central opening, *f*, is in front of the flat surface of the prism, and is exactly in the center of the revolving disc, A, Figure 2. Through this the observer, seated, looks at the object circle placed at a proper distance in front of, and from, the eye-piece; K L is a spring clip for holding the trial glasses. This eye-piece is about four mm. thick; *g* is an upright of about one-fourth inch brass gas tubing, securely attached to the eye-piece, and of convenient length.

luster. The four sides, as at *d* of this shallow box, are each 1 inch in width, and the area of the galvanized iron front surface is 12x12 inches; C C represents two hooks to hang this frame securely against a wall, at some point in an office where the object-circle A can be plainly seen by diffused light. The disc with the prism attached to the eye-piece, is shown at B, and the eye of the observer is drawn at C looking through the central opening O at the object-circle A. The rays of light, E F, emanating from the object-circle, pass through the prism and enter the eye of the observer; and by prismatic deflection a false image, A′, of A, the true circle, will be seen on the front surface of the eye-plate *d*; and if the arrangement is perfect and the eye normal, their inner circumferences will touch, as well as the images at the retina of the eye, as shown at C. The eye-piece B, through the upright K, is secured at *f* by a screw to the solid rod *g*, which plays up and down in the gas tube *h*, and is secured at any point by the thumb-screw *i*. The upright, *h*, is screwed into the head of the tripod *l*, and the lower end of each leg of the latter is adapted to a slot in the plates *p p p*, which plates are screwed permanently to the floor. The foot of each leg can be sprung out of the several plates, and thus the tripod can be readily removed or placed in the clips, and set out of the way, or placed in position for use. The height from the floor to A, and from *p* to O, should correspond—about 44 or 45 inches. From the center of A to the center of O should be an imaginary axial line, and the planes of the eye-disc B and of the anterior surface of *d* should be directly opposed and at right angles to this axial-right-line in every meridian. Thus, as the eye-disc M revolves on its axis in an undeviating plane, the inner margin of the false image A′, will touch the inner edge of the true image A, at each meridian,

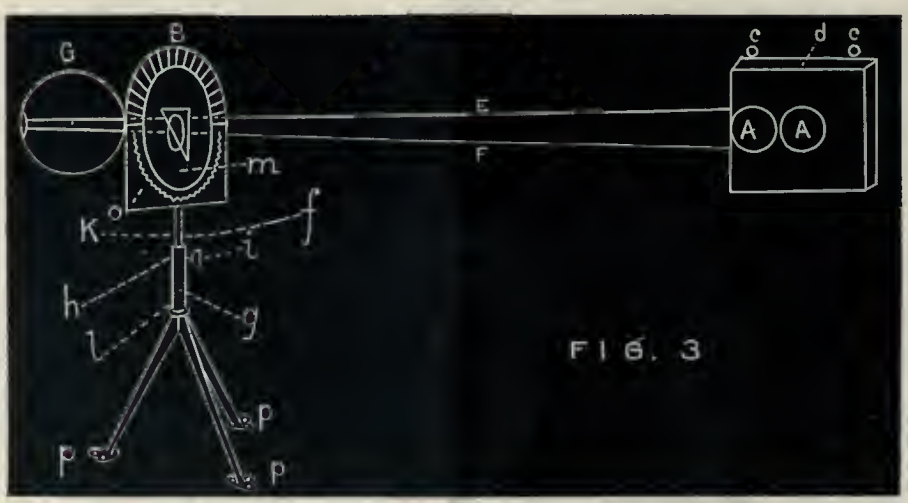

FIG. 3.

Fig. 3 represent the object-circle A, cut out of galvanized iron, behind which rests securely, by clips, a portion of *white opaque glass*, as pure white as possible. The surface of galvanized iron around this *single white circle* is made a deep black color, without

which would not be the case if the eye-disc did not revolve in a true plane.

The measurements are as follows: Diameter of the object-circle, A, 220.5 mm.; diameter of the eye-piece, B 6 inches; diameter of the revolving

disc, A, figure 2, 22 mm.; diameter of the central opening in the revolving disc (see figures 2 and 3), F, 3 mm.; the distance from the object-circle (from A to O,) to the anterior surface of the prism, 3075 mm.

A larger object-circle is not desirable, and if a greater distance between it and the prism is wished, say twenty feet, the deflecting power of the prism must be diminished. A longer space between these will secure a greater separation or lapping of the object-circles, which will enable the patient to see this effect more readily than when nearer to the object.

It is now desired to know the total refracting power of a given prism. To determine this the prism is mounted in the eye-piece, and the central opening exposed to a beam of sunlight, and the two round images of the opening received upon a white, flat surface, the latter placed at right angles to the beam of light, and say 1000 mm. from the anterior surface of the prism. The circumference of these two images is marked off on the white surface, and the distance between the inner edge of one circle and the outer edge of the other measured. This will give the deflecting power of the prism at 1000, which is 71.75 mm. in our prism. What will be the deflecting power of this prism at 3075 mm. from its front surface to the object-circle? This is found by simple proportion. Thus: 1000 : 71.75 : : 3075 : 220.-63125 mm. We construct an object-circle accurately round of 220.5 mm. diameter, in the front surface of the object-plate; and after carefully correcting our own eye, we find that the true and false circles touch at their inner edges. Since now we find the two methods verify each other, the instrument may be assumed to be correct, especially if, on revolving the prism, the inner edges of the object-circles touch at every point of the lower semi-circumference.

What is the deflection of this prism in degrees? This may be determined by the well-known proposition, that, in a right-angled triangle the square of the hypothenuse is equal to the sum of the other sides. It must be remembered that the distance from the prism to object-circle is cosine, and from this, in part, we obtain the radius.

Figure 4 is necessary to illustrate. Let A C be the cosine, 1000 mm. in this case, or one side of the triangle, A B C, and C B, be the other side, 71.75 mm., deflection of the prism at 1000 mm. Describe the arc, E B F G. What is the radius of this arc, or A B the hypothenuse? By the proposition we have the formula $\overline{AC}^2 + \overline{BC}^2 = \overline{AB}^2$. Substituting $\overline{1000}^2 + \overline{71.75}^2 = \overline{AB}^2 = 1000000 + 514{,}0625 = \overline{AB}^2 = 1005148.0625 = \overline{AB}^2$. Extracting square root last quantity AB = 1002.57072 mm. The latter quantity being the radius, the natural sine = the deflection of prism divided by the radius, or $\frac{71.75}{1002.57+} = .071655$. This denotes a prism having a total deflecting power 4° = 6′ 31.2″.

To render the rays of light still more parallel, I have lately increased the distance of the object-circle from the prism to about twenty feet, or 6045 mm., and diminished the refracting power of the prism, which gives a smaller object-circle.

This prism refracts at 1000 mm. 25.5 mm., and at 6045 the refraction is 154.1+ mm., which is the diameter of the object-circle, and agrees with the size of the same circle found by experiment with the corrected eye. The total refraction of this prism is = 0° 8′ 43.8″.

A few examples in the practical use of the instrument may be given:

A young man aged 17 years, on looking through the prism, states that the images are lapped when the index is horizontal. I know he is myopic, because these are lapped in that meridian, and now placing different concave glasses in the clip behind the eye-piece, it is found that a —37-inch glass causes the images to touch in the left eye. On revolving the prism the images separate, and this separation is greatest when the index is at 50° left, corresponding to 40° right axis of the prism. On placing a + 30-inch cylindrical glass, its axis is at 40° right side, the images just touch at that point. I now revolve the prism, leaving both glasses in the clip, and find that the images touch in all the semi-circumference. I place these glasses in a trial frame, the cylindric at an axis of 40° right, and he reads No. 15 Snellen at 15 feet.

In the right eye index horizontal (the defective meridian) the images are lapped; a —37-inch spherical glass brings them together. Turning the index to (left) 60°, the images are apart most at that meridian, and on placing a + 15-inch cylindric its axis at 30° right, the images touch, and now, on revolv-

FIG. 4.

ing the prism, they touch at every point of the semi-circumference. I place these glasses in a trial frame, as above, the axis of the cylindric at 30° right, and he reads No. 15 Snellen at 15 feet. $V_2 = {}^{15}/_{15}$.

CASE 2. A boy æt. 16; index horizontal; sees images lapped; on trial, a concave 21-inch glass brings them together. On revolving the prism, index at 5° right, images are apart most; on placing + 49-inch cylindric, its axis at right angles to the index, or 85° left, the images touch, and on revolving the prism they touch in all the semi-circumference in the right eye, V R$= {}^{15}/_{15}$. In the left eye index horizontal, images lapped; a—21″ spherical glass brings them together. On revolving the prism, index at 5° left, they separate most at that point, and on placing a + 49-inch cylindric, its axis at 85° right, they touch at that degree, and in all the semi-circumference on revolving the prism. I place the above glasses in a trial-frame, and he reads No. 15 Snellen at 15 feet. His astigmatism and myopia are, therefore, corrected.

CASE 3. A gentleman, 54 years old, on looking with his right eye, finds the images apart, index horizontal. By trial, a + 37-inch spherical glass causes the images to touch. On revolving the prism, they touch in all the semi-circumference. I place + 37″ spherics in the trial-frame, and he reads with each eye Snellen ${}^{15}/_{15}$, and with both eyes the same. His hyperopia has been corrected.

CASE 4. A lady, æt. 20, reads unaided with left eye Snellen 200 at 15 feet, and in right, O, Snellen at 15 feet. On looking, she cannot with the right eye distinguish the outlines of the circles, but only a light, blurred appearance. I do not know if she is myopic or hyperopic, but suspect myopia, from the form of the eye. I apply a 30″ concave; she sees better, and finally with a spheric 2½-inch glass the images are distinctly seen to touch, and on revolving the prism they do so in all the semi-circumference. In the trial-frame, with this glass she reads Snellen ${}^{15}/_{50}$.

In the other eye, index horizontal, images blurred —weaker concaves improve the vision, finally—8¼-inch spheric causes the lapped images to touch. On revolving the prism, index to 15° left, the images are lapped (to the greatest extent) again, and on placing by trial a —9¼-inch cylindric, its axis at 75° right, they are brought together, and now they touch in all the semi-circumference. On placing this combination in the trial-frame she reads Snellen ${}^{15}/_{70}$′ & $V_2 = {}^{15}/_{50}$′.

CASE 5. A lady, æt. 25 years, on looking through the instrument with her left eye, finds the images most lapped the index at 5° right, but they touch at the other meridians. A — cylindric of 21 inches, its axis placed at right angles to the index, or at 85° left, causes the object circles to touch. On revolving the prism, the images touch in all the semi-circumference.

The other eye, detected in the same manner, requires a—15-inch cylindric, its axis at 85° right, and now the images touch in all the semi-circumference. She can now read with either eye, and with both ${}^{15}/_{15}$ Snellen, and the simple astigmatism has been corrected.

CASE 6. A young man æt. 22 years, sees with his left eye the images most apart index at 30° right. A + eighteen and one-half inch cylindric, its axis at 60° left (at right angles to the index), causes the images to touch. On revolving the prism index to 30° right the images are most lapped, and a — thirty-seven inch cylindric, its axis at 60° left, causes them to touch. The images now touch in all the semi-circumference on revolving the prism. The other eye requires a + twenty-one inch cylindric, axis 75° right, and a — thirty-seven inch cylindric, axis 15° left. With either eye and both he reads S ${}^{15}/_{15}$, thus his crossed astigmatism has been corrected for each eye.

This instrument, excepting the prism, was made in this place. It need not be expensive, and any one familiar with the subject can set it up. Its description may seem intricate, but, when seen, its construction is quite simple.

All that the observer has to answer, in being tested, is, do the images touch, or are they apart, or do they lap? If apart this denotes hyperopia; if lapped, the patient is myopic. Even children can answer these questions satisfactorily. It is commendable, then, as the observer can at once comprehend his part in the examination.

It is also a great time-saver, a few moments enabling one to determine the glasses required, in the most exact manner.

The name selected for it is PRISOPTOMETER, from *prisma*, prism; *optikos*, optic; and *metron*, measure; denoting a method of estimating ametropia by means of a prism.

Finally, we could have demonstrated fully all the optical problems belonging to this subject, but do not consider it necessary, as these are found in standard works. We only have desired to present the instrument for consideration in a practical manner.

We have modified this instrument in various ways, but have decided this to be the most practical method of using a prism for measuring ametropia. Thus, we tried to use a + six inch glass in combination with the prism, to overcome the action of the ciliary muscle and enable the use of a short tube, to render the instrument more convenient, but this was not effectual in controlling that muscle. Again, we endeavored to use a telescope with the prism, but this would not answer, for the patient simply looked at the near image in the telescope, when the case demands that the object should be placed at quite a distance from the eye of the observer. Numerous other plans were adopted in the use of the prism, but all failed but this upon which we now rely.

It is the duty of the manufacturer to give the distance from the object circle A to the front surface of the prism at O, Fig. 3, for each instrument. The purchaser, in setting up this instrument, should hang up the object-plate *d*, Fig. 3, upon a wall securely, by the hooks *c c*, and place the eye-piece, attached to the tripod, at the distance A O given by the manufacturer. Looking through the aperture O at the object-circle A, Fig. 3, and the index being at 90°, on the *left* side, as at E, Fig. 2, the two images will touch, as at A A′, Fig. 3. Turning the index up to

0°, Fig. 2, the images will touch, and still revolving the index to 90°, on the *right* side, the images will be tangent, and if the images touch at *these three points* the position of the tripod is correct, and the foot-plates, *p p p*, Fig. 3, should be screwed to the floor securely and permanently. Thus the tripod can be removed from the plates, or placed in them when the instrument is in use, and the distance between the eye-piece and the object-plate is always the same when the instrument is in use, WHICH IS ABSOLUTELY ESSENTIAL. *The eye of the party setting up this instrument should be corrected, by test-types and glasses, else he will inflict his errors of refraction upon his patients.*

Messrs. Geo. Tiemann & Co., 67 Chatham street, New York City, are the manufacturers of the instrument.

Zanesville, O., Oct. 26, 1883.

SOME GENERAL FACTS CONCERNING INEBRIETY.

BY T. O. CROTHERS, M.D., SUPERINTENDENT WALNUT LODGE, HARTFORD, CONN.

A careful study of cases of inebriety from any point of exact science will always lead to the same conclusion, that inebriety is always a positive physical affection, with a distinct ætiology and symptomatology.

The theory of half vice and half disease, to be remedied by moral means at first, then, when these fail, resort to physical and medical appliances, has no support from scientific study and the natural history of the cases.

When the history of many cases are studied and compared, the evidence is unmistakable that inebriety is a form of insanity, distinct and prominent, requiring special study, and special means and methods of treatment. Also, that, ætiologically, they divide into two groups or classes in which are included all cases.

The first group are those cases in which inebriety is an expression of a neurotic defect of the brain centers, frequently inherited and developed through certain exciting causes, of which alcohol is the most prominent.

Inebriety is always associated and marked in this group with physical signs and hints that suggest an imperfect development; great weakness or convulsions during childhood; retarded mental growth, approaching idiocy, or extraordinary precocity, with brain growth and development far in advance of their age.

The crisis of puberty develops perversions and changes that determine all the after life in such cases.

From this time emotional exacerbations, nutrient disturbances and perverted ambitions, which merge quickly into inebriety from the slightest causes.

Obscure states of nerve exhaustion, called properly, "a decline," are most quickly relieved by some form of alcohol, which sooner or later ends in inebriety.

Often alcoholic excess or intoxication follows the first use of spirits, then a long period will follow in which no spirits are used, or, if any, in great moderation.

But an inebriate soil has been prepared, and only awaits a favoring germ cause to spring into activity. During this period of incubation, in which no alcohol is used, a high degree of mental activity is frequently prominent. He will exhibit great strength, coupled with eccentricity, and a changeable, erratic line of conduct.

If he is a public man his conduct will excite great admiration and condemnation. If in business circles, he will be an extremist in work and judgment.

Farther on, he may be very passionate and irritable, and will not bear opposition. Often these men are the wild advocates of new schemes of every description.

A large number of the foremost temperance reformers have been of this class; always on the verge of inebriety, with every symptom and indication present, except the use of spirits.

The religious ranks have numerous types of this class, in which some slight variation or change, and the pronounced inebriate appears.

They are neurotics from infancy, and varied conditions of brain and nerve instability appear along the course of life.

The organism is not fitted to harmonize with the varied surroundings, or to bear the strains incident to constant change.

Neurasthenic states, psychical neuralgias, marked by depressions, and complex symptoms of every kind, that are as intense as they are transient, all crave some relief from outside sources, and find in alcohol a narcotic of the most seductive character.

Thus, under the mask of relief, alcohol kindles and develops a disease that has a most favorable soil for its growth.

Hence it appears that inebriety is an expression of nerve degeneration and exhaustion, which has begun long before alcohol was used, and this drug builds up diseased tendencies and pathological changes that ever after crave its narcotic effect.

In the second group, inebriety is an expression of certain states of ill health, and failure of brain and nervous system, growing out of special physical conditions and surroundings.

This is seen in cases of inebriety that have sprung up in bad sanitary surroundings, where bad food, overwork and underwork, and want of proper rest, have brought on conditions of the body for which alcohol was demanded, and produced relief.

The two extremes of society furnish the most numerous examples.

The very poor, who from their sufferings and necessities develop a low state of health and impaired brain force; and the very wealthy, who from want of healthy activity and hyper-nutrition, are also equally impaired in vigor and health; are grounds from which a large number of inebriates are constantly recruited.

Where inebriety does not appear in the very wealthy class, it follows in their children with more or less certainty, and can be traced to a line of distinct physical causes.

Inebriety frequently appears in a middle class of hard-working, temperate men, and has in some cases an obscure origin and progress.

In many cases, active, temperate men will suffer from some protracted sickness, and after recovery begin to use spirits, either to excess at once or after a short period of moderate drinking. Thoughtless people will find that alcohol has been used as a medicine, and conclude that this was the only cause, and thus condemn the physician, when, in fact, inebriety came from some injury to the brain centers following the illness.

The changes of vigor and health following any protracted disease, and the entailments that develop other troubles, are the common observation of the profession.

The same will be found true in many cases of inebriety which are literally the results of pathological changes that have begun long before.

Traumatism is another starting point of inebriety in this class. A direct injury to the brain from a fall or blow, or a severe wound, or exhausting hæmorrhage, is in many cases the beginning of inebriety, which may begin with a period of moderate drinking, or with impulsive and excessive use of spirits at once.

Psychical traumatism, or injury from mental shock of any kind, is another common cause in persons who were previously temperate and healthy.

Here inebriety is a hint of some injury to the nerve centers, and unmistakable sign of pathological change.

These are the cases whose obscurity suggests a spiritual origin, to all who are anxious for an explanation of all the phenomena of nature.

Such cases are invariably interpreted as springing from the sudden growth of a sinful nature.

A great moral lapse of character and giving way to evil of the heart.

In the first group vice and sin was rampant from the start, in the latter it simply triumphed at last after a long struggle.

In the first group are those whose general history, both physiologically and psychologically, borders more or less closely on that shadowy land of disease, insanity and crime.

In the second group inebriety is acquired, and the outgrowth of physical states and injuries.

The theory that in all cases alcohol is the only cause, is unsupported by facts from a study of cases.

The methods of treatment where alcohol alone is removed, furnish strong evidence that this is only one of many causes, in the many failures that follow.

When the history and symptoms of a number of cases are accurately observed and compared, they will be found to follow a certain uniform line of progress.

Beginning at a certain point, the same stages, marked by the same symptoms, follow each other with a regularity that points to the reign of law, and causes that are uniform in their action.

In most cases two periods appear to be prominent; one beginning somewhere in the past, sometimes traceable, but generally obscure, marked by certain signs of mental and physical debility, which increase along a regular line, that can be often defined and predicted.

The second period dates from the first toxic action of alcohol, intoxication, or excessive use, and ending in death. This is also marked by distinct stages, that are uniform and clear. The progress of the case from this time is within the observation and range of every general observer.

It may not always be uniform; halts and variations in the order of events may appear, but the same general line is preserved.

All study of these cases indicates the possibility of predicting the approach of inebriety, and anticipating its march and progress at every step, with the same certainty that the movements of the heavenly bodies are known.

What we want, is a knowledge of the forces and causes, and the influences on certain physical organizations; then the problem will be clear.

Another conclusion still more startling comes from a general study of these cases. It is that inebriates are the results of physical causes and conditions; that they are grown and manufactured, as much so as cotton and wool, and the machines to work them into fabrics, the difference being only in the process of manufacturing, whose complexity is beyond our present knowledge to follow out.

In outline we can trace an intimate relation between inebriety and great social revolutions, wars, and disasters which affect the interests of large sections of country.

We can see inebriety coming from the neglect of great physical laws; we can mark its footsteps as a tide of disease, ebbing and flowing, following some unknown germ cause, and we know that the same eternal order of cause and effect reigns here as elsewhere.

As medical men, it is our duty to find out these causes and the laws which govern them.

The impulse to use alcohol is not an accident or evil impulse to do wrong, which might be checked with ordinary prudence and self-control. It is the outburst of some diseased tendency, which seeks relief, and grows into great proportions by the very means which it demands.

Let the conscientious observer start from any point of inquiry and seek facts alone, and he will arrive as the same conclusion, that inebriety is a physical disease, and as he goes on further in his investigations, the causes and their prevention will come out distinctly and with startling significance.

He has touched the shores of an almost unknown continent, about which to-day there are written those sands of volumes, and hundreds of papers, whose descriptions of this country are worthless, and whose theories are but fags and superstitions of the infancy of the subject.

Inebriety can not be reasoned out, it must be seen and studied as a new country, above all theory and speculation.

The problem is a serious one, and its solution determines the interests of vast numbers of persons. Personal, social and political interests are involved, the influence of which are becoming more and more important every day.

Inebriety is increasing far more rapidly than the increase of population.

Penal methods of punishment for restraint are everywhere recognized to be failures; and worse than all, increasing and making the victims more incurable. Short terms of imprisonment and fines for the purpose of checking inebriety, are literally building up and educating a chronic class, that always entails heavy burdens on the community, and is a source of peril to law and order.

The methods by appeals to the emotional faculties, to sign the pledge and become converted, must of necessity fail, as they do not recognize the physical condition of the inebriate.

The time has come for medical men to teach the public what inebriety is, and is not, and not the victims of this malady and the teaching of moralists whose shifting dogmatism is unworthy of notice.

The problem is a medical one, and can only be solved by an appeal to the facts gathered from many sources by accurate observers.

Every physician in the country can study inebriety in his own circle; he can group the facts he may discover, and deduce some laws which govern them. In this way he can become a pioneer, and thus help to solve a problem against which all theory and speculation will beat in vain.

The time has come to put on one side the theories of the hour, and demand the facts and their meaning above all theological and popular notions of the day.

If inebriety is a physical disease, then we have it in our power to reach and prevent it by the use of physical means along the line of causes.

If inebriety is the outcome of physical conditions and surroundings, then a knowledge of these will enable us to apply preventive medicines and means that will reach out and prevent the disorder, and restore the victim.

Here is a field where the best trained medical men of the country will find vast regions of unknown facts, and where each may be a discoverer untroubled by rivalry or competition with others.

SOME MEMORIAL REMARKS ON THE LATE DR. J. W. PRITCHETT.

Gentlemen of "The McDowell Medical Society:"

Fortunately for the present incumbent of that chair, the custom requiring an address from the President has been abolished. Yet it occurred to me that a few remarks upon the life work of our lamented Fellow and former President, Dr. Jno. W. Pritchett, would not be inappropriate on the occasion of its first meeting after his death.

Consequently I have jotted down during a few moments snatched from the cares of domestic affliction, and the worry of business, some notes of his life and death.

Dr. Pritchett was born in Hopkins county, Ky., near Madisonville, its capital, on the 6th of June, 1839, and died at his residence in Madisonville, July the 21st, 1883, being at the time of his death 44 years of age. Though thus early called from his labors, he had accomplished much that deserves commendation and honor, especially when we recognize the circumstances that surrounded his youth and embarrassed his early efforts. He had no opportunity of an early education, but was compelled to labor on his father's farm until he was eighteen years of age; when, inspired as it were by an irresistible desire for knowledge, and a larger field of usefulness, he determined to obtain an education, and prepare himself for a professional life, and chose medicine as affording greater opportunities for doing good. He accordingly went to Harrodsburg, Ky., one of the early fields of the professional labors of our distinguished Henry Miller, who was his model as a man and physician. There he attended a literary course. From Harrodsburg he went to Ann Arbor, Michigan, and attended its medical college for one term, doing some practice as an undergraduate between terms, and finally graduated at "Jefferson Medical College," Philadelphia, in March, 1864.

Immediately on his return from Philadelphia he resumed his practice in his native town, where, without intermission or rest, he continued to labor in the profession of his choice, up to the day on which his diseases, by their slow but sure inroads upon a constitution not naturally robust, but elastic and enduring, compelled him to give up work and an active life for a lingering confinement to a sick room—the greatest trial to such a spirit. He was confined to his bed nearly seven months by hepatic trouble and bronchitis, which latter, perhaps, terminated in phthisis pulmonalis. He suffered but little pain, but was the subject of constant cough, accompanied by fever. Though annoyed so long, one who nursed him much during his long illness, writes: "His patience and resignation have never been excelled, for in these he was perfect." Without a murmur he waited for the end. He was always conscientious in his attentions to all who placed themselves under his care, or to those who were committed to his professional guidance, whether rich or poor. He rarely ever permitted pleasure to interfere with his duties and obligations to his patients.

He continued to work long after he was physically unfit for exertion of any kind, and often would deprive himself of much needed rest to visit a patient whom he found much less disabled by disease than himself. From the beginning of his professional life he was very successful, both as a general practitioner and surgeon, and secured from the first a very extensive practice—but, as I am informed, not a very lucrative one, from the fact that he never paused to consider the financial condition of his patrons, but went when and where he was called, scarcely thinking of compensation or reward, except the consciousness of having done his duty by his efforts to relieve human suffering.

Dr. Pritchett could have consistantly adopted as the embodiment of his professional life the sentence attributed to the celebrated Borhaave, "The poor are my best patients for God is their paymaster," as he truly won the title of the "poor man's doctor," which to the eye of God and the true philanthropist, is a proud and noble title. As to his deserving it, no better proof is necessary, than the numbers who attended him daily during his long illness, and the

long procession that followed his remains to their narrow abode; and really there *can* be no better evidence of a useful and unselfish life; nor could a more eloquent eulogy be pronounced, than this demonstration of the high and grateful esteem in which he was held by those whom he had so faithfully served, and so often relieved by his skill and watchful care, those to whom he had never failed to minister in their hour of sore affliction and need. To them he was truly "the beloved plysician."

It was my good fortune to become intimately acquainted with Dr. Pritchett for several years before his death, and to some extent possess his confidence, often meeting him in attendance on the "American Medical Association".—The Kentucky Medical Society, and on this Society—of all three he was a member, and also of the Tri-State Society of Indiana, Illinois and Kentucky. Of this Society he was an ex-president, and consequently to you gentlemen who knew him so well, no eulogy of his life and character, or tribute to his memory is necessary, for I am convinced that no feeble words of mine could add to the already high position he occupies in your hearts, as an earnest and sincere physician, a modest and unassuming member of not only this Society, but of your good and truly great profession. He had profound confidence in medicine to prevent and cure disease. His courtesy and love for the members of his profession was constantly exemplified by his actions. He was always ready to uphold and encourage every worthy member of the profession by word and deed.

Though an enthusiastic advocate of medical organzations—unlike some, it was not with the hope of place or position in them—but for the aid, as he expressed it, which such organized bodies of medical men rendered medical progress, and the ethical spirit that such organizations promulgated, enforced, and kept fresh in the minds of their members, was the life of medicine.

Would to God this was always the case, and that every one who bears the title of M.D. would become not only members, but attending and active members of well organized societies. Dr. Pritchett's high sense of honor towards his professional brethren, and his strict adherence to every provision of the Code of Ethics—as far as your memorialist's observation extended—was especially commendable. His domestic relations, from the same standpoint, were characterized by pure affection. He was genial and affectionate in the domestic circle, where his loss is most deeply and keenly felt. Ever to the writer, his social qualities were of the most cordial character, his hospitality profuse, his friendship true, and characterized by sincerity and durability. One quotation made by his faithful nurse and devoted wife, in a letter to me, speaks a volume of the loss, grief and sorrow his death occasioned in the heart of her who deserves our sympathy, as the life-companion of our professional associate and friend.

In the letter giving date of his birth and death, etc., she says: "I can only add, how I grieve 'for the touch of a vanished hand, and the sound of a voice that is still.'"

Dr. Pritchett gave promise of much more than a local distinction as a surgeon, which he had already deservedly earned in his community, as the result of several successful operations of a formidable character; but, like so many of our promising workers in the field of medicine and surgery, he was prematurely cut down by that inexorable man with the scythe, yet in the prime of his usefulness, and just as he had fully entered the inner hall of the practical temple of medicine, with its walls adorned, as they must be to insure success, by the mind-pictures of long years of experience, and accurate observation of disease in all its protean forms; or, in other words, a memory well stored with pictures of his past experience, the only sure guide for the future, for theories are deceptive. He was evidently a "self-made man," which is always the more useful and better class of men, when they make themselves right.

He idolized his profession as the noblest, and reverenced the great among its members as the greatest among men; but if he had a special idol on earth, and one which he considered as the legitimate offspring of professional love and scientific zeal, that idol was "The McDowell Medical Society."

Consequently, in closing this brief, imperfect and unworthy tribute to the memory of one of its most faithful members and earnest workers to maintain its usefulness, and promote its reputation for scientific and practical work, which it has so deservedly earned by the character of its papers and the usual ability with which they are discussed at each semi-annual meeting, permit me to suggest the appointment of a committee to draft suitable resolutions of respect for *its* devoted son and *our* brother, and sympathy for his bereaved wife and five fatherless children.

MEDICAL PROGRESS.

MEDICINE.

ON PYLORIC INCONTINENCE.—Under this title Ebstein, in the *Press Medicale Belge* (Archives Medicales Belges), considers the difficulties in making a proper diagnosis of affections of the stomach, especially in locating the seat of the disease at either the pyloric or cardiac orifice of the stomach. Among the appreciable affections of the pylorus is the stenosis or contraction of the orifice, the symptoms of which, according to Abercromie, consist of periodical vomiting after meals, and a persistent, painful sensibility in the gastric region. There are also cases where the closure of the pylorus is incomplete, forming a true insufficiency or pyloric incontinence.

In the normal condition the pylorus closes completely, separating the stomach from the duodenum. The anatomical arrangement of the tranverse and longitudinal fibers is a proof of this. Glisson, however, considers that the cardiac orifice alone contracts. Henle believes that it (the cardiac orifice) closes as energetically as the pylorus. According to Ebstein, during digestion the pylorus, which has been closed, becomes fatigued, and relaxing, allows the alimentary fluids to pass out by degrees, to be followed by the solids. In other words, it loses gradual-

ly its contractility, under the influence of the repeated stimulus of the contents of the stomach.

Ebstein attempts to prove the occlusion of the pylorous by distending the stomach with carbonic acid, introduced as tartaric acid and bicarbonate of soda. He introduces 5 or 6 grammes of a mixture composed of 10 parts of bicarbonate of soda to 9 parts of tartaric acid, which results in the formation of 1,500 to 1,800 cubic centimeters of carbonic acid. If the pylorus is normal, the resulting distension, as shown with dogs, does not extend to the intestine; and he considers that this mode of procedure should prove of marked value in the diagnosis of pyloric incontinence. It also projects the walls of the stomach against the abdominal parietes, and permits of a mapping out, through percussion, of the contours of the organ itself. If the pylorus is sufficient and closed in the normal manner, percussion produces no modification of sound in other parts of the intestinal canal. On the contrary, if the pylorus is insufficient, we have a tumefaction of parts of the intestine in connection with the gastric distension, like acute tympanitis. Ebstein cites two cases where pyloric incontinence was diagnosticated in this manner during life, and the diagnosis confirmed by post-mortem evidences.

The established fact of pyloric incontinence does not, however, give any assistance in determining the nature of the disease which is present. Purely nervous causes may produce it, but for the greater part it is due to ulcerative destruction or to infiltrations, which interfere with the proper functions of the sphincter.

Local Temperature in Diseases of the Abdominal Viscera.—According to Prof. Peter, in *Le Praticien*, (Archiv. Med. Belges) the temperature in these affections is elevated in direct proportion to the intensity of the inflammation. In the absence of all disease, in the normal condition, the temperature of the abdominal parietes is much below that of the axilla, ranging from 95°.6 to 95°.9; but under the influence of a phlegmasia or of an irritation it may equal or exceed the axillary temperature. This fact may serve, for example, as a means of distinguishing between simple gastralgia and pains in the stomach which are due to some form of gastritis.

In a young girl suffering from ulcer of the stomach, while the axillary temperature varied between 98°.3 and 98°.6, the epigastric temperature was, in the intervals of pain and vomiting, between 98°.6 and 99°.5, and when the hæmorrhages occurred it reached 101°.3.

In a man affected with chronic alcoholic gastritis, the temperature of the epigastric region rose from its normal 95°.9 to 98°.3, while the axillary temperature was 98°.6.

In a patient affected with chronic gastritis, caused by insufficient alimentation, the epigastric temperature reached 98°.3, the axillary temperature being 98°.6. This elevation of the temperature led to a diagnosis of gastritis with fluxion or congestion, and eliminated the purely nervous gastralgia.

In a patient attacked with hepatic colic, at each crisis the temperature in the right hypochondriac region exceeded that in the left to the extent of 1°.8, 2°.7, and even 30.4.

In tubercular peritonitis, the temperature rises ordinarily 1°.8 to 2°.7. A case of tuberculosis, which suffered from abdominal distension, pains, etc., not having an abdominal temperature above 95° 9, enabled M. Peter to eliminate tuberculous peritonitis, and to diagnosticate a pseudo-hysteria, a grouping of nervous symptoms which are not rare in phthisical cases.

Severe Hiccough.—Dr. Ruhdorfer, in the *Allgemeine Wiener Medizin Zeitung*, reports a severe case of the above, lasting for three months, and which morphia, given hypodermically, could only check for a few hours or days. It resisted all the usual remedies, such as quinine, alone and with extract of belladonna, tincture of castoreum, or tincture of valerian, in water or with aromatics, mustard poultices over the stomach, dry cupping down the spinal column, chloroform, ether, zinc, bismuth, numerous emetics, and purgatives. The patient dragged on for three months under various remedies, morphia being administered whenever a single attack lasted beyond eight hours. At last the attack became overpowering, and the hiccough was so loud that the patient could be heard outside the house, through two doors. She sat up in bed, supported by her parents; there were dyspnœa and cyanosis; the head was jerked in all directions, the pulse was small and frequent; the neck was distended. Remembering a case in the *Revue Medico-Chirurgicale*, Dr. Ruhdorfer injected a solution of pilocarpine hydrochlorate (3 centigrammes in a gramme of water). The hiccough was at once cured, as if by magic, and has never returned since. —*British Medical Journal.*

Downward Displacement of the Transverse Colon. — Dr. Charles Hermon Thomas, in *Illustrated Medicine and Surgery*, records three cases of this curious affection. In the first, a man 80 years of age, the most dependent part of the gut was found midway between the umbilicus and the pubic symphysis; in the second, a woman 54 years of age, it was deeply impacted in the pelvis; and in the third, a man 30 years of age it reached the level of the umbilicus. In the first case there was tumor and profuse diarrhœa. In the second case there was pain, referred chiefly to the region of the liver, existing for five years, obstinate constipation with indications of obstruction, and two solid tumors occurring at intervals, which proved to be the descending and ascending limbs of the displaced transverse colon. In the third case there was pain, and tympanitic resonance on percussion. No adhesions of the displaced parts were found in any of the cases cited.

Nephritis Produced by the Compression of the Ureters in the Course of Cancer of the Uterus, with Consecutive Hypertrophy of the Heart.—M. G. Artland (*Revue de Médecine*) gives the details of six cases observed by himself and M. Straus, to illustrate the discussion of this subject. The con-

clusions reached by him are, in effect: That in the course of cancer of the uterus, there may develop, as the result of compression of the ureter, certain lesions of the kidney, differing in their character according to the degree and duration of the compression. When the compression has been slight, the kidney remains normal in size or is slightly increased in volume, the histological lesions consisting of a nuclear infiltration about the uriniferous tubules and vessels, a hypertrophy of the glomeruli, and a dilatation of the convoluted tubes, the epithelium of which has undergone a fatty-granular degeneration. The collecting tubes have remained very nearly normal, and their epithelium does not seem to be altered.

When the compression has been so prolonged that the ureter and pelvis have become markedly distended, the kidney atrophies, and the degree of atrophy is in direct relation to this dilatation of the ureter and pelvis. The histological lesion consists in the change to a fibrous condition of the previous nuclear infiltration, in the obliteration of the collecting tubes, the epithelium of which has undergone the embryonic retrogression. The glomeruli are either fibrous or cystic. The convoluted tubes present the same change in their epithelium as before mentioned.

These lesions of the kidney are similar to those which are produced in ligature of the ureter in animals. They differ from the latter in the fact that they constitute a diffuse nephritis, rapid in its course, in the development of which the inflammatory element takes the greater part; whilst the mechanical element is predominant in the evolution of the kidney lesions resulting from the aseptic ligature of the ureter.

These renal lesions caused by the compression of the ureter in the course of cancer of the uterus, frequently produce an hypertrophy of the heart, which affects exclusively the left ventricle, and which is rarely, if ever, accompanied by interstitial myocarditis

TOXICOLOGY AND MEDICAL JURISPRUDENCE.

ON PTOMAINES, OR CADAVERIC ALKALOIDS.—There has recently arisen in patholgical chemistry a class of substances known as ptomaines, the properties of which are becoming more clearly defined, but which are very little known to those who are not directly workers in that branch of medical science. A writer on this subject in the *Lancet*, R. N. Wolfenden, M.B., who is the lecturer on physiology in the Charing Cross Hospital Medical School, calls our attention to this, and to the fact that the lawyers have already found them out, and made use of some of their peculiarities in arguments for the defense in a recent trial for murder.

The term ptomaine is a misnomer. It was first applied by Selmi to these bodies, to indicate that they were of cadaveric origin; but investigations are rendering it more and more probable that alkaloids of a poisonous nature occur in certain pathological conditions, and possibly also normally as a product of change of living tissue. Selmi supposed them to be products of putrefaction of organized nitrogenous material. They are variable in their nature according to the length of time after death, and though not present within a few hours after death in any appreciable quantity, they slowly develop with advancing decomposition. They are often amorphous in form and alkaline in reaction, for the most part volatile and easily alterable, forming crystalline salts with acids as a rule. The addition of acids to them usually changes them, with the production of pleasant odors like orange flower, musk, etc. Allowed to oxidize by contact with atmospheric air, they emit disagreeable cadaveric or urinous odors.

Some of these ptomaines are not poisonous, but most possess strongly toxic characters, and cause profound symptoms when injected under the skin, such as paralysis, more or less complete, of hinder extremities, dilatation of pupils, convulsions, muscular flaccidity, slowing or acceleration of the heart, loss of cutaneous sensibility and of muscular contractility, possessing many of the characteristic physiological actions of muscarin or atropin. They answer to nearly the same reactions as the vegetal alkaloids, and all have a strongly reducing action on potash ferridcyanide. They yield color reactions with sulphuric acid (red), iodic acid and sulphuric acid (violet), nitric acid (yellow), etc. These ptomaines are met with under the following conditions:

1. As a constituent of normal tissues or juices. In this case they are products of tissue metamorphosis. *Saliva* evaporated to dryness, extracted with boiling water and filtered, gives a toxic substance which converts ferridcyanide of potash, along with one or two drops of ferrichloride, into Prussian blue. Injected into the thigh of a frog, it kills the animal, and differs from snake poison only in the greater intensity of the latter. Normal *urine* gave Gautier a fixed oxidizable alkaloid, which forms a crystalline chloride, and also a crystalline double salt with platinic and gold chloride. This alkaloid is very poisonous, killing quickly with systolic standstill of the heart, stupor, and paralysis.

2. In certain pathological conditions. In the urine of patients suffering from progressive paralysis there are two volatile bases, the one like nicotin, the other like coniin. In the urine voided during a case of interstitial pneumonia were two alkaloidal bases, one having the odor of stinking fish, the other of ammonia. Two similar bases were found in the urine of patients with abdominal typhus. In tetanus a base like coniin was discovered in the urine. In the urine of "miliary fever" an alkaloidal base having the odor of stinking fish has been observed.

3. As cadaveric or artificial. There can be no further doubt that these bodies are largely produced in the process of decomposition of nitrogenous or proteid tissues. There are many varieties of them and they vary much in their nature, according as the length of time after death is long or short. Stinking fish, bad meat, etc., all contain poisonous principles which can be extracted after the manner of ptomaines. The gastro-intestinal irritation and profound toxic symptoms produced by the ingestion of bad food are probably at the bottom processes of alkaloidal poisoning. By decomposition of neurin and albumen toxic bodies may be obtained much resembling mus-

carin. Both from freshly prepared peptone made by the action of gastric juice on pure fibrin, and from stinking peptone by boiling with caustic soda, evaporating, extracting and purifying, toxic alkaloids can be obtained which kill frogs and rabbits in a few minutes. Putrefying casein, brain substance, liver and muscle also yield these products. Some of these ptomaines are poisonous, some non-poisonous; and it is common to find a poisonous and a non-poisonous variety linked together. No chemical test has as yet been devised that is at all crucial, and the general reactions, taken along with their physiological peculiarities alone, can be taken as evidence of the presence of a ptomaine.

The ptomaines, so far described, are:—1. Ptomaines like atropin and hyoscyanium crystalline, and which dilate the pupil and accelerate the heart. They are obtained from putrescent albuminous fluids. 2. An alkaloid from decomposing yeast, called sepsin, which resembles strychnia. 3. An alkaloid resembling morphia in its tests, but not in its physiological properties. 4. One agreeing with delphinin. 5. One resembling strychnia, but not causing tetanus. 6. Alkaloids like muscarin. 7. Alkaloids like coniin. 8. Alkaloids resembling parvolin and hydrocollidin. To sum up the manner of production of these bodies:

1. There are developed in the body, post-mortem, poisons of an alkaloidal character, and which can be obtained also by decomposition of albumen, peptone, casein, muscle, brain, etc. Moreover, they seem to be present in some normal secretions (saliva and urine.)

2. These cadaveric alkaloids may be mistaken, post-mortem, for vegetable poisons administered with evil intent, but if the body be examined within from twenty-four to forty-eight hours after death, any alkaloid there found would be strong presumptive evidence of poison, and not ptomaine. After a couple of days it may be a matter of doubt.

3. There is no satisfactory test surely indicating the presence of a ptomaine. Physiological characters must be taken in conjunction with chemical tests.

4. Probably the production of ptomaines within the living body may be the pathological cause of many obscure conditions, especially those following on poisoning by bad food, such as stale fish, etc.

Tears of Blood.—M. Damalix has published in the *Archives d' Ophthalmologie* an interesting article on this rare phenomenon. A young girl, in the service of M. Panas, affected with non-convulsive hysteria, gave an account of being often affected with a discharge of blood, which soiled the handkerchief used in wiping her eyes. This discharge returned nightly during a specified time. Examination of the eyes showed that they were intact, the only noticeable affection being a marked blepharospasm, with photophobia and facial neuralgia.

There are a number of similar remarkable cases, the record of which leaves no question as to the possibility of such a hæmorrhage; in one case of Hasner's, and in another of M. Brun's, the observers saw the eye fill with liquid blood as it fills with tears, without the possibility of fraud. In the latter case, the microscope showed that the blood was very nearly normal.

As to diagnosis, it must be remarked that one would not describe as tears of blood the various hæmorrhages which are dependent upon a lesion of the orbit or of the mucous membrane. It might be that the little polypoid vegetations that develop in the conjunctival cul-de-sacs would escape attention, and cause a discharge of blood simulating this condition. But the tears of blood are absolutely independent of any ocular alteration, and their evolution is neither fixed nor regular. There seems to be no cause for their effusion. Without effort or pain these patients weep blood. The eyes become moist, the tears fall upon the cheeks, and it is when the patient wipes the face that the blood is first noticed. At other times there are certain premonitory symptoms, such as frontal pain, brow pain, or pain at the root of the nose; or perhaps a tickling or pricking sensation, with a feeling of warmth to the eye-lids; then, as the discharge occurs, the disagreeable sensations pass off. The discharge varies in quantity from a few drops to a liqueur-glass full, only lasting a few minutes. These phenomena are essentially intermittent, sometimes regular, but nearly always transitory and coincident with the different hæmorrhages of the skin and mucous membrane.

Considered ætiologically, the only fact which can be determined from analyzing these observations is that these tears of blood constitute a passing anomaly in individuals that are anæmic and inclined to hæmophilia. and that they can act as supplemental to the menstrual flow, but that they occur especially in the hysterical women.—*Revue Medicale.*

On the Possibility of Making a Cadaver Disappear Entirely by the Use of Ordinary Sulphuric Acid.—A. P. Reynard, Comptes Rendus de la Societe de Biologie) tells us that in consequence of the attempts made by Prof. Girard to totally destroy the bodies of sheep affected by charbon by placing them in their weight of commercial sulphuric acid, and thus destroy the virus that Pasteur declares cannot be destroyed by burial; he concluded that here was a means which might be employed to destroy the evidence of crimes committed, and made certain experiments to see how far a human body could be so disposed of.

This method could not very well be used in the case of adults, as it would require too much acid and vessels of too large size—but in the case of abortion or infanticide, unfortunately, nothing is easier than to destroy all traces of the crime by means of sulphuric acid. He placed the body of a new born child weighing 3 kilos, in a suitable vessel containing 4 liters of sulphuric acid. Thirty hours later, without the giving off of heat or odor, the cadaver had disappeared. The best means of disposing of the remaining acid is that which would most readily occur to the mind of the criminal, that is, to throw it into the drainage of the house—the pipes being made of pottery are not affected, the acid encounters the carbonate of ammonia from the urines, etc., sulphate of ammonia and carbonic acid is the result, and all trace, not only of the crime itself, but also of the means used to conceal it, is obliterated.

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THE EDITOR of this JOURNAL would be glad to receive any items of general interest in regard to local events, or matters that it is desirable to call to the attention of the profession. Letters written for publication or containing items of information, should be accompanied by the writer's full name and address, although not necessarily to be published. All communications in regard to editorial work should be addressed to the Editor.

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ANNUS MEDICUS, 1883.—It is withal a goodly custom which impels us at the beginning of each successive year to inquire into the year's endeavors, seek to discern its lessons, and thereby more advisedly enter upon the untried tasks and cumulative duties which are just ahead. Time and progress solve the most difficult problems. While some great genius may suddenly illuminate the scientific world, as instanced by Galileo and Newton, in the physical sciences, and our own Sims in surgical science, yet after all it is the steady accumulation of knowledge year by year which accomplishes the great achievements of scientific investigation.

In all departments of medical science the past year has been one of intense activity. Never before in the history of our profession have there been so many able investigators engaged in advancing the physical sciences, among which medicine stands preëminent. Human anatomy is regarded an exhausted science, and in so far as it is descriptive, justly so. Yet our esteemed contemporary, the *Annals of Anatomy and Surgery*, has given the profession some valuable papers in anatomy, and enters the new year with improved facilities for cultivating the sciences to which it is devoted. The past month witnessed the appearance of the last fasciculus of Prof. Harrison Allen's splendid treatise upon the human anatomy, of which a distinguished teacher of that department of science says: "I know of no similar work in any language which, either in text or illustration, is so well adapted to the wants of the medical student and practitioner." Thus it will be seen that anatomy continues to receive that attention from persistent and advanced investigators which it so eminently deserves, and which in time will materially improve existing knowledge. In physiology the greatest advances are evident in connection with researches upon the nervous system. We doubt not the forthcoming work of Professor John C. Dalton on the Topographical Anatomy of the Brain, will embody the results of mature and painstaking investigation in a field long cultivated by this distinguished author.

In general and special pathology, many valuable additions have been made to our knowledge. More than a year ago a strong impetus was given to the investigation of germinal pathology, by Koch's discovery and demonstration of the bacillus of tubercle. As usual with the advent of innovations, more was claimed by enthusiasts as the result of these investigations than is warranted. The professional mind has now realized that in this discovery more is indicated in the way of possibilities, than as absolutely determined in regard to the nature, progress, and communication of phthisis. In diagnosis, prognosis, and prophylaxis, Koch's investigations are destined in time to render most important service. Not the least agreeable to contemplate of benefits, is the encouragement given to that industrious and ingenious class of workers, headed by Virchow, who have done so much of late years to place practical medicine among the exact sciences. Among the notable events of the year, in this connection, is the work of the cholera commissions in Egypt, headed by Koch and others, the results of whose labors are not yet fully known. In practical therapeutics, the past year has witnessed a popularization of the physiological, in contradistinction to the empirical method, together with a wholesome appreciation of facts and a judicious examination of results. To our national pride it cannot but be gratifying, to realize that the two greatest works on therapeutics extant are from the hands of American authors, the preëminent value of which is attested by rapidly succeeding editions, and almost universal adoption as text-books, both at home and abroad.

The past year has witnessed the steady progress of surgical opinion towards a realization of the fact that the value of antiseptic methods consists for the most part in cleanliness and drainage, and little, if anything, beyond. In abdominal surgery, the most brilliant results have been achieved, and conditions formerly regarded incurable are now relieved by the bold use of the knife. In the various departments of general surgery, many and permanent additions to

knowledge have been made which time will not permit us to enumerate.

In obstetric practice, the greatest advance of recent times springs from the growing opinion that puerperal fever is not, as heretofore regarded, the result of a specific germ, but that it is identical in its nature with surgical pyæmia and septicæmia. The discussion of this subject by leading investigators in this department of medical science during the coming year cannot but be of great benefit to obstetric practice.

The advance of medical thought in America during the past twelve months has been more marked in no department than in the prolific field of sanitary science. In all matters appertaining to State medicine there is a degree of activity which has already accomplished much, and which is growing in efficiency and practical importance. That in all branches of preventive medicine we are making steady and substantial progress is evident to the most casual observer. One of the most welcome features of progress is the growing interest in sanitary matters on the part of the intelligent laity, and the increasing aid in the States to Boards of Health. There are still many needed reforms and improvements which we may confidently expect the near future to supply.

A consideration of the great activity in all the branches of medical science and practice brings to the mind of the appreciative reader at least one important suggestion. Never before was there a time when the duty was so imperatively enjoined upon the practitioner to study the development of recent investigations. To discharge the duties of the hour, the physician must be informed upon those advances which increase the extent and exactness of his knowledge, and extend the scope of his armamentarium. His greatest aid in all that appertains to progress and improvement is the medical journal which visits him from week to week.

In conclusion, we wish for all our readers a Happy New Year. In this trite form the compliments of the season are exchanged, but from one physician to another it means a great deal. No calling in life is so sublimely epic as that of the physician. His ministrations bring him daily in contact with scenes of anxiety and sorrow. His triumphs bring joy to men, women and children, and often he shares the common orrow. His happiness is so interwoven with that of his patients that in wishing him a Happy New Year, we bespeak the health and happiness of those who come under his care. Fully appreciating the import of these words, the editor of the JOURNAL wishes for all its readers a happy and prosperous New Year 1884.

WHAT CONSTITUTES A "PROFSSSIONAL CARD?"—In the *Medical Record* for December 15, the editor, in alluding to our article on Ethical Advertising, in the number of this journal for November 10, says: "We cannot but think that our Chicago contemporary is doing a serious injury to the profession by advocating for specialists and doctors generally a license which it never has been and is not now considered decent to assume." And *the license* thus spoken of, he quotes from our editorial as follows: "No one is prohibited from publishing or using a professional card as freely as he likes, simply announcing himself as doctor of medicine, and giving his residence and office hours. * * * If he desires to limit his practice to the treatment of any particular diseases, he can say on his card that 'his practice is limited' to this or that class of diseases." Then, with characteristic ethical perversity, our friend of *The Record* exclaims: "To say that any physician 'can publish his professional card as freely as he likes,' is to take down all the barriers at once against promiscuous medical advertisement. With such a liberty one could take up *half a column* in a daily paper, and still keep within the pale of the Code."

How easy it is by simply changing the *article* "a" to the pronoun "his" in one half of a sentence, and leaving the other half out, to misapply and misrepresent the whole. And how adroitly the editor of *The Record* does it. When we said, "a professional card" could be used as freely as the possessor might wish, we were careful to add that the card should "simply announce himself as a doctor of medicine, and give his residence and office hours." To talk about filling "half a column in a daily paper" with a card containing simply a physician's name, residence and office hours is too absurd to need comment. Does our New York contemporary really desire his readers to think that he does not know the difference between a professional card proper, and a handbill or a newspaper essay?

After the earnest protest against the dangerous "license" we are represented as advocating, our friend proceeds as follows: "In the larger cities of the East, and in most, if not all, of those in the West, reputable physicians do not put their card and office hours in the daily papers, as do the quacks and abortionists. * * * In small towns it is, perhaps, well enough to allow the local physicians to insert their cards along with the dentists, carpenters and tinware men."

Ah, yes! how graciously liberal, and withal how consistent our friend shows himself. "A *license* which it

never has been and is not now considered *decent* to assume," and which "reputable physicians" in the great cities of the East and West do not practice, may, after all, be "*well enough* to allow the *local physicians*" in the "small towns" throughout the country. Well might these "local physicians" in the small towns, who constitute two-thirds of the whole profession, ask this metropolitan editor, "on what has my lord been feeding," that he and his city friends should have developed a dignity so exalted as to require one code of ethics, while another and lower one will do "well enough" for their less exalted country brethren?

Does he suppose there is an intelligent physician in all the country who does not know, that the reason why physicians in the large cities do not put their cards into the daily papers, is because it is rendered wholly unnecessary and useless by the publication annually of city Directories in which all their names and residences, and business are announced, and that too, along with the "dentists, carpenters and tinware men," and even sometimes sandwiched between the "quacks and abortionists." These Directories, revised every year, and found in every public house and permanent business place, afford a far more effectual as well as cheaper mode of advertising the members of the profession in all the large cities, than would be a proper professional card in the advertising columns of a daily paper.

Again, we are told that, "the permission to announce the 'practice limited to,' will strike sensible people as being silly, if not actually dangerous. * * * * While the attempt to make a distinction between 'practice limited,' and 'practice special' appears to us a foolish quibble."

Is it possible that our New York contemporary can see no difference between the addition to an ordinary professional card of the words "practice limited to diseases of women," by which the public are notified that no other diseases will be attended to, and the favorite phrase, "Special attention given to diseases of women," by which the public fully understand that the party claims *special* or *superior* qualifications for the treatment of those diseases, and yet may do as well as ordinary physicians in the management of any other affections? Is there no difference between notifying the public and the profession that you will attend to but one class of patients, without any allusion to special qualifications, and a notice that you will give "*special*" (which means unusual or superior), attention to that class, and yet leave yourself free to attend to whatever else may offer? The difference is so plain, that although the "permission" and "license," which *The Record* affects to regard as so dangerous to the welfare of the profession, was sanctioned by a unanimous vote of the American Medical Association nearly ten years since, yet we have not seen a single specialist's card containing the dangerous declaration. Neither do we expect to see any, simply because the ambitious young specialist who would be very glad to have the ethical privilege of offering to give *special* and extraordinary attention to a particular class of diseases, will also be very careful not to notify the public that he will attend to nothing else.

It is a little singular that an editor who boasts of such ethical *liberality* as to permit the taking of every votary of the pathys, isms, and quackery of the day, who can get a State registration license, into consultation at the bed-side of the sick, as provided by the New York Code, should have such a horror of seeing a simple professional card in print.

We have nowhere advocated professional advertising, but, as our readers very well know, have simply pointed out, in answer to direct questions from correspondents, the only way that it can be done without positive violation of the rules governing the profession at large.

SOCIETY PROCEEDINGS.

THE CHICAGO MEDICAL SOCIETY.—REGULAR SEMI-MONTHLY MEETING ON THE EVENING OF DECEMBER 17, 1883.

Dr. D. W. Graham presided. The scientific business transacted consisted in the disposal of two papers. The first, being a paper on "Alveolar Abscess Opening into the Antrum and Nasal Cavity, Simulating Chronic Nasal Catarrh," was read by Dr. John S. Marshall. It contained the following salient points regarding the origin and causes of ozæna, namely, syphilis, struma, lupus, ulceration, caries of the bones or cartilages, inflammation of the mucous membrane of the frontal and maxillary sinuses, and alveolar abscess opening into the antrum of Highmore or the nasal cavity direct. The origin of certain forms of chronic nasal catarrh with fetid mucopurulent discharges is not always easy to locate, and especially is this true if the latter enumerated cause is the primary seat of trouble, and opens into the maxillary sinus. Abscesses forming at the apex of the roots of the superior incisor teeth, bicuspids or molars, may discharge into the cavities of the antrum or nasal fossa, and range from a slight nasal discharge to a most offensive ozæna, and it is not at all uncommon to find the roots of the superior molars penetrating the maxillary sinus. Less frequently, however, the bony plate over the apex of the incisors may likewise give way, especially over the apex of the central incisor this may occur, and an offensive discharge

per se into the nasal passages or posterior nares so closely simulate chronic nasal catarrh as to entirely mislead the most careful diagnostician, whereas the real source of trouble may be a diseased tooth. During the past three years the writer has seen two patients who were suffering from this form of disease, who had been treated for months as cases of chronic nasal catarrh. The sphenoidal and frontal sinuses and the maxillary antrum may each be the seat of this morbid condition, and fetid discharges from the nasal passages be the result, *i. e.*, of the accumulation of the morbid product in the accessory cavity, which becomes distended, and the overflow escapes from the little orifice into the nasal cavity. Text books allude to this disease in a mere paragraph sometimes and undoubtedly the subject deserves more attention than has hitherto been given to it.

Antral abscess is a much more serious difficulty than the affection just described, the former causing at its inception rigors and fever, and involves much more of the adjacent structures, periosteum, etc. In antral abscess the pus may be retained between this membrane and the bone, causing absorption of the walls of the antrum; and it may open into the mouth, orbit, or through the external surface, and cause hideous deformity. Extensive necrosis of the maxilla often follows, and it may extend to the ethmoid, lachrymal, palatine, and inferior turbinated bones, with cerebral abscess, unless early recognized and interfered with by surgical means.

When a dental abscess opens into the maxillary sinus, there may be danger of septic poisoning, if the secretions become foul and no other outlet is present. If this should occur, it will be attended, of course, by serious constitutional symptoms. When it escapes into the nose the discharge will be unilateral, in its always being from the same nostril, and most abundant when a patient is lying upon the opposite side.

After the cases, with the symptoms, history, etc., etc., had been cited, the paper concluded with the treatment, which consists in syringing the cavity of a tooth and abscess through the pulp canal with warm carbolized water, 2 grs. to the ounce, once daily, and packing the tooth with carbolized cotton, and sealing it in with gutta-percha stopping to exclude external moisture. Sometimes the buccal roots can be explored with a fine probe, by passing it upwards for an inch and three-quarters. Water can be thrown into the antrum of Highmore through the roots of the teeth, and the fluid will escape into the nose. A tooth always needs to be extracted, if not already missing, and we then discover, most likely, that the pus will escape into the mouth through the alveoli, and that the ends of the buccal roots are somewhat rough, and portions already have been removed by absorption. A few weeks' time of treatment in this manner usually results in a most satisfactory improvement or entire recovery of the patient.

The paper elicited considerable discussion. Dr. T. W. Brophy said that he had seen and treated a great many cases similar to those cited by the writer of the paper, that had previously been treated by physicians for nasal catarrh. He also illustrated his remarks by giving a method by which he was treating a case at present, and draining the antrum through an opening into the mouth by a metal tube or canula. The patient has been under his observation for ten months, and was for four months previously treated for the nasal difficulty alone, by a physician having a large practice. The case is now almost entirely well. I think the discharge of pus into the nasal cavity occurs more frequently from the incisor teeth than from the molars, and necrosis frequently results from the alveolar abscess that at first has formed at the roots of the teeth, and sometimes involes the entire upper maxilla. He was much pleased with the paper, and had been much interested thereby. Dr. Edmund Andrews inquired of the author what form of syringe he used in treating this class of cases? and what form of point the syringe had?

Dr. W. W. Allport stated that the paper presented by Dr. Marshall was well prepared and timely. That similar cases to those mentioned by him do sometimes occur there is no doubt, but not so frequently that any one individual sees and treats a great many of them, as Dr. Brophy states he has done. I think that I am an ordinarily careful observer, but during my thirty-five years of practice, I have seen but very few of such cases—not to exceed five or six—and I can hardly see how it is that any one man has treated so many cases similar to those mentioned in the paper as the gentleman preceding would have us infer that he has. Dentists frequently have fistulous openings and occasionally a diseased antrum to treat caused by alveolar abscess. But alveolar abscess simulating nasal catarrh is met with seldom, and I think Dr. Brophy has misunderstood the idea conveyed in the paper.

Dr. Robt. Tilley stated that he has treated catarrhal troubles of the ear that had been primarily connected with the teeth, but a case had never occurred in his practice of catarrh of the nose originating from the teeth where perforation had occurred, as was described in the paper, and he took pains to examine the teeth and mouth carefully in making his diagnosis. He would like to inquire, without naming any one, if dentists had ever tried using the remedy peroxide of hydrogen in "syringing out" this kind of pus cavity? He knew it to be an efficacious remedy for dentists to use, aud suggested it as a valuable agent in the treatment of alveolar abscess. Twelve volumes of oxygen in solution is used in full strength by oculists in Paris in treating eye affections, and he presumed it could be used in the same strength in treating these abscesses.

Dr. Brophy arose to add to his former remarks that he did not wish to be understood as saying he had seen more cases of alveolar abscess than other dentist, as might be inferred from the remarks of one of the gentlemen who had the floor a few moments ago. He, however, would verify the statement he made at the beginning of the discussion—that he had met with a good number of cases of this variety, and would at an early period present a paper on this subject before this Society, which he would be pleased to do as soon as he can have the drawings made to illustrate the facts

Dr. Allport said, regarding the use of peroxide of

hydrogen, it is coming into general use by dentists. He knows it to be an exceedingly useful remedy, as he has practiced using it a good deal, and concluded by saying the author of the paper, he thought, had ably called attention to an important subject this evening; one that is generally overlooked in diagnosing nasal catarrh.

Dr. Marshall closed the discussion by describing the kind of syringe used, as one speaker had inquired about it, by saying it was the ordinary dental syringe fitted with a flexible metal point. He stated that the peroxide of hydrogen was in general use, although he had not used the remedy in the treatment of this class of cases; but certainly should regard it as valuable in the treatment of blind alveolar abscesses. Regarding the cases he had reported, he said they had previously been under the observation of intelligent and well educated physicians. The object of the paper was to call the attention especially of the medical profession to one of the most obscure causes of fetid nasal catarrh—a cause which in a majority of cases, he thought, was overlooked by them.

The following is the substance of a paper presented by Dr. Wm. L. Axford, on "Packing-House Wounds," from observations made during the past three years. The bad consequences ensuing from very slight wounds on the hand and forearm (oftentimes amounting to a mere scratch), when inflicted by knives used in packing-houses, are familiar to many of you. When the skin has been cut through and the cellular tissue opened, an intense cellulitis, terminating in the formation of large quantities of pus, requiring free incisions, has been almost invariably the result. From a small cut in the back of the hand, a cellulitis extending half way up the forearm is not an uncommon result, and cases under observation have occurred where the inflammation extended to the elbow. If the sheath of a tendon be opened, or the tendon cut, sloughing is the usual termination. If the wound extend deeper and the periosteum is cut, nearly every case will be followed by periostitis with necrosis. The cause must, of course, be the septic material conveyed into the wound from knives used daily in cutting meat, which probably are rarely cleaned with care, and never disinfected, although they may be ground and washed daily. Wounds are of daily occurrence at some of these large houses, and from past experience I am led to think we may expect the worst consequences to follow where the knives used by "shavers"—*i. e.*, those employed in removing the finer hair from the bodies of the animals after they have passed through the "scraping machines." (The "American hog," of course, being the animal alluded to, that undergoes this sudden and complete metamorphosis).

The wounds seem to pursue the same destructive course and resist antiseptic measures, as if no treatment were adopted. The treatment of wounds of this nature is, when necessary, to approximate the edges with sutures, then by using freely either carbolic acid, solutions of eucalyptol, or iodoform, all of which have been tried, and still, union by the first intention has never yet occurred in the practice of the writer.

A better plan might be to put aside the idea of securing union by the first intention, (which is but problematical) and direct our measures towards preventing the inflammatory consequences by arresting the spread of the supposed poison through the tissues, or, in other words, treat these cuts from the first as poisoned wounds, and try to prevent the further invasion of the septic material. To do so, if called immediately, apply thoroughly to the cut the actual cautery as the best means of destroying the poison. This heroic method the writer is convinced will diminish the suffering of the patient, and lessen the actual inconvenience so far as time of recovery goes.

Perhaps, if we inject antiseptics, such as carbolic acid, tr. iodine, or other solutions, into the tissues about the wound, that they might take the place of the actual cautery, but their efficacy as adjuvants to the treatment by the cautery in fresh wounds can be better tested by using them after the more heroic method of searing the surface first, has been done.

If, however, some time has elapsed since the injury before we are called, it would be more advisable to dispense with the cautery and trust entirely to the injections, and environ the wound by a layer of some reliable antiseptic dressing.

Among those who discussed the paper was Dr. E. Andrews, who stated that he was frequently called to attend severe cases, the result of so-called "packing-house wounds." Some patients are more violently poisoned than others. He recalled a case of a man whose foot had been injured by a machine that is used in an "offal factory" to grind the bones of the animals slaughtered, and the foot was completely destroyed. The leg was at once amputated, but in 12 hours the flaps mortified, and the lower half of the thigh was distended with gas. In another 12 hours the entire thigh was tympanitic, and a few hours more the man died, not so much from shock as from being poisoned to death. Another case he saw, was where a man had been cut by a cleaver (used in a packing-house) in the lower portion of the "shin." It pursued the same course to a fatal termination. The juices that oozed from the stump after he amputated the leg contained large numbers of bacteria, and the case presented what he termed septicæmia with a vengeance. He also gave the history of a third case with the same final result, death. Some authors termed this traumatic gangrene; others, gangrenæ septicæ. It is a virus, but does not think many of the hogs have this virus.

Dr. Robert Tilley thought that no advantage could be gained by using a cautery in these cases, if amputation proves to be of no avail, and he thought a simple hot poultice would be the better method to destroy septicism, because bacteria do not thrive at a temperature a little above that of the body, or to keep a hot appliance continually to the wound. He had treated a number of cases of wounds received in soap factories, none of which had septicæmia.

Dr. Graham had seen a number of chronic cases of the kind of which the paper treated, and thought part of the virulence is due to the way this class of people live, as they live in a vitiated atmosphere at

their homes, also the peculiar modes of the individual in their hygienic care of themselves.

Dr. Axford thought the cause of these poisonings was due to the knife being dipped in blood nearly constantly by butchers, and is the carrier of the virulence instead of the hog, at least in most of the cases, and that we should be on the alert for the after consequences, which are most sure to arise. He was convinced that every man wounded at these places by the knives used there is actually poisoned.

L. H. M.

PROCEEDINGS OF THE SUFFOLK DISTRICT MEDICAL SOCIETY.

[Section for Clinical Medicine, Pathology and Hygiene.]

ALBERT N. BLODGETT, M. D., SECRETARY.

SUDDEN DEATH DUE TO HÆMORRHAGE FROM THE HEPATIC VEIN.

Read before the Section for Clinical Medicine, Pathology and Hygiene, of the Suffolk District Medical Society, Nov. 14, 1883.

Dr. A. F. Holt, Medical Examiner for Middlesex, presented a paper upon a remarkable condition found at the judicial autopsy of a pátient dying under peculiar circumstances. The cause of death here reported, namely, hæmorrhage from the hepatic vein, has not, so far as known, been previously observed. The case occurred in the practice of Dr. Dow, of Cambridge, from whose notes the clinical history as here given has been copied.

J. C., an Englishman, fifty-six years of age, large, and strongly built, though slightly hunch-backed, died May 15, 1883. For the last six or seven years of his life he had been engaged in a small kindling wood trade, doing some of the manual labor required by such a business himself. For the ten years before this time he had been a police officer.

Ten or twelve years before his death he began to have severe attacks of colic. These continued to occur at irregular intervals during his life, and for the last six or seven years he was never quite well, although able most of the time to attend to his business. During these years he had consulted a large number of physicians. Most of these pronounced his trouble gall-stones, but some of them dyspepsia, and still others some obscure disease of the liver.

Seven days before his death, while in Boston attending to some business, he was suddenly prostrated with a very severe attack of pain in the region of the stomach, nausea, and faintness. He was taken to his home in Cambridge in a carriage, and his physician, Dr. Dow, was immediately summoned, who found him suffering from severe pain, vomiting at at short intervals, pale, and faint. The pain and faintness continued until evening, he having been taken sick about noon, when the doctor was hastily called again. He found him vomiting blood in the form of very large dark clots. This continued at short intervals about one hour, when it ceased. A little over three pints of blood was vomited at this time. The pain and faintness continued for three days. Although these symptoms were somewhat relieved by stimulants and opiates, at the end of this time he was again attacked with the vomiting of blood, as before, in the form of very large black clots. This continued at short intervals until nearly two quarts had been ejected, when it suddenly ceased; and after this he was very weak, faint, and nearly pulseless. The pain continued a few hours after this vomiting, when it ceased. Although his mind was clear, he did not rally, but gradually sank, and died forty-eight hours later, or a little less than seven days from the commencement of the sickness. No blood was at any time passed by the rectum.

Autopsy 23 hours after death. There was no sign of decomposition; rigor mortis well marked; body that of a large, muscular man, and quite fat. There was a thick layer of fat over the abdomen. All of the abdominal organs were imbedded in this tissue. The walls of the chest were expanded in front and at the sides to such an extent as to make quite a deformity; and all the organs of the chest were above the fifth ribs. There was a slight adhesion of the left lung to the chest wall at the top, otherwise the pleuræ were everywhere clear, pale and glistening. Pericardium normal, but on opening this sac the heart was seen to present a noticeably peculiar appearance, the right ventricle being distended so as to make a rounded prominence on its upper part near the auriculo-ventricular junction. The right auricle was also distended. Both of these distensions felt elastic to the touch. On opening this side of the heart there was an escape of a puff of gas, and the walls of the organ immediately collapsed. There was no blood in either of the cavities. The right ventricle was a little dilated, and its walls were slightly thinner than normal. Left side of heart empty. The whole organ was rather large. Its tissues were pale, but of a uniform color. The valves were in every way healthy, and but little blood flowed from the cut ends of the large vessels.

The lungs were very broad and thick, making up in these dimensions what they lacked in length. They were everywhere of a uniform pale color, with darker marbling, except the dependent portions, which were a little reddened. They were also everywhere crepitant, the cut surface showing nothing abnormal, except that the blood-vessels of these organs contained but little blood. The mucous membrane of the bronchi and trachea was pale, and in places smeared over with a little frothy mucus. The spleen was more than twice the usual size. It was fairly firm. Sections showed it of a dark-red or blackish color, and the pulp largely increased. But little blood flowed or could be squeezed from the vessels. Both kidneys were imbedded in large masses of fat. They were a little larger and firmer than usual, the capsules slightly adherent. The cut surface showed the cortical part of a uniform pale red color, and of proportionate thickness. The tubular part was of a bluish tinge, and the blood-vessels could be seen as red lines. These organs contained but little blood. Ureters and bladder healthy. The latter contained a little urine. The stomach was large and flabby, and contained about a pint of liquid food. It, as well as parts of the transverse colon, was firmly adherent to the

lower border of the liver. All its tissues were normal in appearance, except that part where it was attached to the liver, which was a little reddened. The pylorus readily admitted the thumb. The duodenum was empty. Opposite the head of the pancreas could be seen the papilla marking the entrance of the common bile duct, as large as the end of the finger, and projecting into the gut. The opening of this duct would readily admit a pencil. Just inside the duct, lying loosely in the canal, was a gall-stone of such a size as to render it a little difficult to force it through the opening into the intestine. The common duct increased in caliber as it approached the liver, until it and the hepatic duct were dilated into a sac or pouch of about two ounces capacity. The walls of this pouch were very thick and hard, and there was a deposit of a dense tissue around them. At the lower end of this sac, near where the gall bladder entered it, was a cup-shaped depression the size of half a chestnut. When a little water was poured into this a shreddy mass floated up, being attached to the sides and bottom (recent ulceration). On the upper side of this dilated duct, and immediately opposite where the blood-vessels entered the left lobe of the liver, was a similar spot of ulceration, somewhat larger and irregular in outline. On handling a little blood was seen to flow from the bottom of this depression, and an opening was readily found leading directly into one of the vessels entering the left lobe of the liver.

I believed this to be a branch of the hepatic veiu, but all of the tissues in this vicinity were bound together in such a confused mass I was not quite certain. The gall-bladder was much thickened, and contracted in such a way as to make its cavity very irregular, and of a capacity of not more than two or three drachms. Its mucous surface had wholly lost its honeycombed appearance. The opening between it and the sac was wide enough to readily admit the finger. Both the gall-bladder and sac, when opened, contained a little bloody fluid.

The right lobe of the liver was smooth and glistening; rather large, and a little darker colored than usual. The cut surface showed its cellular structure slightly fatty, and its blood-vessels nearly empty. The left lobe of this organ presented a remarkable appearance. It was of a uniform greenish-brown slate color, smooth, but not glistening; and the contrast between it and the right lobe was very striking. It felt firm. The cut surface was of the same uniform greenish-brown color. All appearance of structure had disappeared. A piece of this lobe could readily be broken with the hands: and the fractured surfaces had much the appearance of a nearly dried piece of mud treated in the same way. The larger blood-vessels could be made out in the mass. They were filled with a dryish brown-red material that remained formed when turned out of the vessel: but readily crumbled in the hand into a coarsely granular mass. The main vessels entering this lobe of the liver near the ulceration above described were filled with the same material.

The large intestine contained a little solid and semi-solid yellowish fæcal matter. The small intestine was nearly empty, but contained a little of the product of digestion, of a yellowish color. Nowhere in this tube was there anything that looked like blood.

Unquestionably the source of the hæmorrhage was this open blood-vessel supplying the left lobe of the liver, the blood readily finding its way into the duodenum by means of the largely dilated duct and its opening into the intestine, and through the rather open pylorus into the stomach. Why all of the blood should take this course and none of it go down the intestinal canal, as it apparently did not, is one of the points in this case seemingly worthy of discussion.

Of course the gas accumulating in the intestinal canal after death found its way by means of the same open vessel to the right side of the heart.

Hæmatemesis, with the blood coming from such a source, must be exceedingly rare, and so far as I am able to learn, this case is unique.

The peculiar condition of the left lobe of the liver I have never seen before. I believe it to have been caused by a complete cutting off of the blood supply, producing a necrosis of the part.

Dr. F. A. Harris, Medical Examiner for Suffolk, said that the strange and heretofore unknown occurrence recorded by Dr. Holt is valuable in making us acquainted with a new causation for sudden death. The medical examiner is required to investigate all cases of death of a sudden or suspicious character, and it no doubt may happen that cases are returned as due to disease of the heart, no other ascertainable lesion existing, which may be due to some cause not hitherto reported and entirely unknown. In many cases some obscure disease might easily be quite overlooked. Among such causes is aneurism, which, even when of small size, may at times obstruct the nutrition, or disturb, and at length entirely suspend, the function of important organs. In one case an unsuspected small aneurism of the internal carotid caused obscure cerebral symptoms, and finally death from pressure upon one of the pneumogastric nerves. Aneurism of the arch of the aorta may be suspected from the occurrence of disorders of the vocal apparatus in the larynx not due to any organic local disease, when the existence of aneurism is not evident from any other symptoms. In such cases the existing disease may be so slight that it may escape observation at the autopsy, and the death of the patient be charged to some other cause. The medical examiner is required to give a cause of death in all suspected cases, the law requiring him to ascertain the manner by which the patient met his death. For this reason, if for no other, all cases of death from rare diseases should be reported, for the benefit of State and local Boards of Health, as well as for statistical and other purposes.

Dr. Fitz considered the paper extremely interesting, and was glad to have heard the report of so rare a case. He said he had never met anything of a similar nature in his personal experience. Gall-stones may occasionally become a cause of ulceration of the gall-bladder and secondarily lead to much further mischief. The reported condition of the liver is very remarkable. Such a change is occasionally observed

in the lung, as a wedge-shaped necrosis of a part of the pulmonary structure due to embolism of some vessel. The necrosed portion then quickly becomes the seat of gangrene, and generally goes on to a fatal termination. The presence of gas in the heart is interesting. The opinion of Dr. Holt that the gas was formed from decomposition after death might be criticised, as it might quite as easily enter the venous channels during life.

Dr. Webber asked if gas, entering the circulation before death, would not be evidenced by a frothy condition of the blood on opening the heart.

Dr. Fitz replied that while this is often the case, it is not necessarily so. It may escape as a free gas. Atmospheric or gas embolism is sometimes observed in other parts, especially in the lungs.

Dr. Prince observed that pancreatic apoplexy[1] may be accompanied by many of the symptoms mentioned in this paper, and quite generally vomiting occurs.

Dr. Church, of Cambridge, presented the following

NOTES OF A PECULIAR CASE IN WHICH THE AUTOPSY SHOWED CONGENITAL ABSENCE OF THE LEFT KIDNEY.

On Tuesday A. M., November 6, I was called to attend Mrs. L., a Swede, in confinement. On arriving at her house I was shown into a room containing a bed, and upon it lay a well-dressed woman, apparently forty years of age; presuming her to be Mrs. L. I approached the bed, and made the inquiry if she was the person to whom I was called, to which she responded in the negative, saying that she was a friend of Mrs. L.'s, and had arrived from Vermont the evening previous, and had not felt well since her arrival. Complained of pain in the stomach and back, with slight headache, but thought she had taken cold, and rest would suffice to restore her to usual health. I then passed on to attend Mrs. L. in an adjoining room, and did not see Miss A. until three or four o'clock in the afternoon, when I obtained the following history: She was born in Sweden; was forty-five years old; came to this country two years ago; had always been well excepting "slight touches" of dyspepsia and occasional sharp pains in the epigastrium. Menopause fully established before she left Sweden. Had worked as a domestic in a farmer's family in Vermont for nearly two years. Said that the bowels were regular, and appetite usually good. Never used stimulants or narcotics. When asked if she had not better have some medicine she said no, as she thought rest and diet would be all that was necessary. Saw her on the following morning while visiting Mrs. L. Said she had not slept during the night previous. Bowels and bladder had been evacuated during the night, but the pain in the back and stomach had not subsided, and she had vomited twice during the morning, and had an attack of epistaxis and severe headache. The tongue was very dry, and in the center covered with a thick, brown incrustation; some sore throat. Examination of the chest gave negative results; the only peculiar feature was the feebleness of the heart sounds. Pulse 88; temperature 96.5° F.; respiration normal; slight tenderness on pressure in the right hypochondrium. Warm applications and stimulants were ordered, and at noon she got up, went into the kitchen, and drank some milk and tea. I did not see the patient again until Thursday morning at 9 o'clock, when I found her comatose. I was told by the people in the house that she had slept all night. At the time of my visit the respirations were heavy, tongue and mouth as dry as parchment, and mouth and throat full of a mixture of dried blood and saliva; pulse 88°; temperature 95° F.; pupils dilated; marked pallor, and a peculiar pinched expression of the face. Feeling that the case would prove fatal, and knowing that the patient had no relatives or friends in this country, I asked City Physician Bryant to see her. Pulse, at the time of visit—12:30 P. M.—90; respiration normal; temperature 95° F.; patient profoundly comatose. At 5 P. M. she became pulseless, and expired at 9 P. M.

Examination of the urine gave the following results: color pale; reaction neutral; specific gravity 1010; large trace of albumen; urea slightly diminished; phosphates and chlorides diminished. Microscopic examination showed triple pho phates, no pus or blood, a few degenerated renal epithelium cells, but *no casts* or *fat*.

Feeling that either from imperfect memory or inability to understand or express herself in our language the history given me by the patient was incorrect, I wrote her employers at Williamstown, Vt., and obtained the following additional history:

First. That she had suffered much from what had been diagnosticated by a resident physician as dyspepsia.

Second. That one year ago she had an illness of five weeks. Diagnosis, "ulceration of the lung and slow fever." That previous to coming into their employ she had visited the Massachusetts General Hospital for nausea and suppression of menses, and was thought to be pregnant.

Third. During the last year, though her appetite was good, she complained of feeling weak, of having headaches and frequent attacks of severe epigastric pains, and cramps in the lower limbs, also of some dizziness.

Fourth. That large quantities of urine had been voided, especially during the night, for a long time.

Fifth. That when she arrived at Mr. L.'s on Monday night she complained of feeling very dizzy, and trembled violently.

Sixth. That for the past eight or nine months the patient had complained of sleepiness during the day, and imperfect vision.

The autopsy was made by Medical Examiner A. F. Holt, Saturday morning, November 10, to whom I am indebted for the following report:

The body was that of a Swedish woman, 45 years of age. The heart was enlarged, particularly the left side. The left lung was adherent throughout. Spleen normal in size and appearance. Left suprarenal capsule in its usual position, but a little larger than normal. No left kidney, renal artery, or ureter could be found, or anything to indicate that they had

[1] A report of two cases, with references to fourteen other cases, was read before the Section May 6, 1882.

ever existed. The right kidney is the one here shown. It is very small, not larger than a large hen's-egg, and shaped much like one. The whole organ feels firm and rather hard. The capsule is much thickened and adherent. The cut surface, when removed, was of a uniform grayish color, with darker mottlings. The line between the cortical and tubular parts could not be made out at that time; now, as it has been in dilute alcohol for a day or two, it can be distinguished. The greater part of the organ seems to be made up of the cortical portion. The whole organ, without doubt, has undergone some marked change, probably interstitial nephritis, but of this I am not certain, as no microscopic examination has been made. The liver was a little larger than normal. Stomach and intestines apparently healthy.

In my experience in making autopsies only in one other case have I found but a single kidney; this was in a man, sixty-five years of age, who died of cancer of the stomach. In that case the single kidney was very large and healthy, and, as in the present case, it was the left kidney which was wanting.

I believe that both of these cases were congenital.

Dr. Church also exhibited the vermiform appendix of a patient who died from perityphlitis and peritonitis, and in which the cause of the disease was found to be an ordinary brass pin, which had been swallowed, had passed through the stomach, duodenum and the entire length of the small intestine, and had entered the vermiform appendix, head downward where it had awakened a violent inflammation with the subsequent fatal result.

Adjourned at 10:40 P. M.

BOOK REVIEWS.

PHYSICIANS VISITING LIST, 1884. P. Blakiston, Son & Co., Publishers, Philadelphia.

This convenient pocket memorandum and case book has appeared regularly for the last thirty-three years. It is too well known by the general profession to need any special description.

PHYSICIANS POCKET DAY BOOK, designed by C. HENRI LEONARD, M.A., M.D., Detroit.

This is meant to cover much the same ground as the last. It, however, lacks the dose tables and such information as is in the other. Both of these books are well bound and of convenient size.

THE RADICAL CURE OF HERNIA. A PLEA FOR THE CURE OF RUPTURE, OR THE PATHOLOGY OF THE SUBCUTANEOUS OPERATION BY INJECTION FOR THE CURE OF HERNIA. By JOSEPH H. WARREN, A.M., M.D. Boston: James R. Osgood & Co.

This is a small paper-covered volume of 125 pages, written apparently to uphold the injection method of treating rupture for radical cure, and perhaps also to identify the author as the legitimate successor of Dowell and Heaton, who formerly had a sort of proprietary hold upon the operation.

At the time of the publication of the supposed valuable secret of this method, it was very extensively tested by surgeons and by itinerants all over this country, as similar methods have been in Germany.

The operation, although a safe one, and the best so far tried, has met with a discouraging number of failures.

That the operation cures some ruptures of course is well understood, but it is also becoming evident that its successful cases, are those in which the simple wearing of a truss often makes a radical cure, *i. e.*, young persons.

Long after the operation has been performed a truss must be worn—a year at least the best writers think—after which time a surprising number of cases relapse and eventually are not improved. Such patients of course deceive themselves and their surgeon into the belief that a brilliant cure has been effected. Months usually elapse before a recurrence of the hernia, and the surgeon may never hear of the final result.

The constant appearance of ruptured patients at clinics and truss establishments, who have tried the injection method with only temporary benefit, is an argument not easy to answer by those who have put forth glowing promises and reports of cases. No case ought to be reported among "cures" until several years have passed by without a return. A prominent Philadelphia surgeon—who was once quoted by the originator of the injection method as having seen brilliant successes from it—afterward declared it as his opinion that no undeniable and permanent cure had ever been made by it.

A MANUAL OF PATHOLOGY. By JOSEPH COATS, M.D. Illustrated. Published by H. C. Lea's Son & Co., Philadelphia.

This manual consists of a single volume of about 800 pages. Its subject-matter is treated of under the headings of General Diseases and Diseases of Special Organs. Under the head of General Diseases are described affections of the circulation and of the blood, inflammation, retrograde metamorphosis, hypertrophy, repair, regeneration, infective tumors, tumors or morbid growths, and parasites. The largest part of the work is devoted to the diseases of special organs and systems. The book is well written and very well illustrated with wood-cuts. It presents clearly the most generally accepted views of modern pathologists. In the chapter on parasites, the author considers quite freely and very fairly the theories and facts pertaining to bacteria. First, the natural history of bacteria is briefly considered, and the methods of detecting them are described. Their influence on living tissue is then considered. Septicæmia, whose bacterial origin is pretty well proven, is described in detail. In regard to the pathogenetic powers of bacteria in acute specific diseases, the author places himself on conservative ground, although he gives full descriptions of the bacteria that have been found in them. He says in regard to the matter: "Bacteria have been found in the tissues in a large number of acute diseases in man, and most of these diseases belong to the class of zymotics. Among the diseases in which, up to the present, such organisms have been seen, may be mentioned small-

pox, scarlet fever, measles, diphtheria, acute rheumatism, erysipelas, typhoid fever, typhus fever, splenic fever, relapsing fever, pneumonia, leprosy, tuberculosis. All that is asserted, in the meantime, is that bacteria have been observed in these diseases; it is not meant that each of these diseases depends necessarily on a specific form of micro-organism."

The work, as a whole, is creditable to the author, and will prove a useful manual to English readers.

DOMESTIC CORRESPONDENCE.

PHILADELPHIA LETTER.

There has probably not been for many years a winter characterized by such indefatigable exertion on the part of the medical profession of Philadelphia as the present. The reason for this unusual activity lies in the fact that a new element has been introduced into the methods of teaching, that of post-graduate instruction. A number of gentlemen from the rank and file have been called upon to assume the responsible position of teachers, and as they are theoretically well qualified for the duties, there is a commendable spirit of rivalry existing which promises well for the future. The rivalry to which we have referred is nowhere more noticeable than at the meetings of the County Medical Society, which are held weekly and largely attended.

For the purpose of giving the readers of the JOURNAL an idea of the character and amount of work done at these meetings, it may be worth while to present some notes picked up from the last two.

On the 12th inst. a conversational meeting was held, the principal paper being that of Dr. Arthur V. Meigs, who selected as his subject, "Proof that Human Milk Contains Only about One per cent. of Casein, with Remarks upon Infant Feeding," a somewhat condensed summary of which would run about as follows: A paper relating to this subject read before the society nearly a year ago had been adversely criticised by reason of the peculiar views then held, but during the interval he had been engaged in further experiments, and so far they had only confirmed the statements then put forward. He said the methods of analyses by different chemists were not free from error, and besides, many of them had started with incorrect premises. As a rule, it was believed that the amount of sugar in milk was small and the casein large, and two reasons were given for this apparent condition, viz.: that there were variations in the milk itself or that the chemistry was faulty. He believed that if the proper precautions were observed, the amount of sugar in cow's milk would be found to be uniform and large, while on the other hand, the amount of casein would be small. By means of the necessary chemical reagents he had been able to obtain the sugar in a crystalline form, and so far as he was concerned, the matter was fully set at rest. Although cow's milk had been objected to on account of the casein it was supposed to contain, his experiments had proven conclusively that this was erroneous, and in this respect opinions were diametrically opposed. An analysis of forty-three samples of human milk, the tables showing the results being presented for inspection, has convinced him that cow's milk when diluted does not supply the place of human milk. The reaction of the former is acid, while that of the latter is alkaline, an important fact which has thus far been overlooked, as the character of the coagulum formed by milk depends largely upon its acidity. Another point to be observed is, that cow's milk contains much more casein, a substance which though but little known, has been found when subjected to the process of drying to become insoluble. The reasons for failure are now apparent, and the want of success can be accounted for, and although much time has already been given to the study of the matter, it is still evident that further investigations are necessary.

A formula was presented for the preparation of an artificial food which shall meet the requirements of the case, but as the paper will be published in full, its reproduction here will not be attempted. It may be added, however, that it will be found most satisfactory in the preparation of the artificial food to use good, fresh cow's milk.

The paper of Dr. Meigs is the result of long and careful investigation, and the principles laid down will undoubtedly have the effect of establishing a new era in the methods of infant feeding.

A clinico-pathological meeting, held on the 19th inst., from the character of the papers presented, may appropriately be termed a medical symposium, the entire evening having been devoted to the reading of papers on, and the discussion of the diseases of, the kidneys, more especially, however, with reference to albuminuria. The only paper referring to therapeutics in renal diseases, was that of Prof. Bartholow, the subject being, "The use of Nitro-Glycerine and Chloride of Gold and Sodium in Albuminuria."

Starting with the proposition that albuminuria was essentially a neural affection, he pointed out two conditions found to exist: first, that in which the vascular supply was deranged by reason of the contraction of the vessels, a circumstance due to the heightened activity of the sympathetic nervous system. In such cases, nitro-glycerine, by removing the tension of the peripheral vessels, lessened the work to be done by the heart, and had the effect of equalizing the general circulation, thus theoretically favoring recovery, and clinical evidence, he said, had confirmed this opinion. Second, a condition obtains in which there is an increased tissue formation, a hyperplasia, and these cases, when seen at an early stage, might be greatly relieved, if not entirely cured, by the appropriate administration of the chloride of gold and sodium, a remedy which in some respects resembles the action of corrosive sublimate. It is a remedy which appears to have a selective action on the sexual functions, but neither this nor its supposed value is a modern discovery, as the use of gold has been referred to by some of the most ancient writers; and in opposition to a generally received opinion that it was first used by Hahnemann, we find quite an interesting account of its history in that curious but antiquated work, "Burton's Anatomy of Melancholy," published, you know, long before the days of Hahnemann. Like all the productions of Prof.

Bartholow, this one partook of the usual features; it was clear, concise, exact, and the logic of his arguments unassailable.

The paper, however, which developed the greatest amount of discussion, was that of Dr. James Tyson, the subject being, "Some Recently Suggested Delicate Tests for Albumen." Dr. Tyson covered the ground pretty thoroughly, so far as known, concerning the substances to be used in testing, and amongst the number reference was made to picric acid, an old method which has recently been brought forward anew, and the drift of discussion seemed to rest particularly on this latter preparation. Along with others who gave an account of their experience with its use, none seemed to cover the ground more thoroughly than Dr. John Aulde, who is reported as follows: Having given this subject some study and investigation recently, I may be able to add something to what has already been said by the gentlemen who have preceded me. That a saturated solution of picric acid is a delicate test for albumen in the urine, none will question; but there is an objection to it, and the same may be said in regard to nitric acid, namely, that it stains the hands and clothing of the operator. The points in its favor are, that a solution can easily be prepared, and it is safe to handle; but there are chances of error, and unless these are first eliminated the physician may be misled by this method of examination at once.

If a quantity of albuminous urine is placed in a test-tube, and a single drop of the solution allowed to fall upon it, a distinct coagulum will be formed, but when there is an excess of albumen, agitation of the mixture will cause it to be readily dissolved. If there are peptones in the urine, the addition of picric acid will be followed by a precipitate, and contrary to the opinion of Dr. Tyson, Gerhardt has frequently observed peptones in urine free of albumen, either as a forerunner or consequence of ordinary albuminuria, while Senator states that peptones exist in every albuminous urine in slight quantities. Another source of error arises from the use of quinine, a substance excreted largely by the kidney, and it has already been stated that a weak solution of the alkaloid, when brought in contact with picric acid, will show the characteristic reaction, but there are other alkaloids which will act in a similar manner, although I am not able at present to name them. The presence of urates will likewise throw down a coagulum with this solution, but not until after some minutes, but it should be stated that there is a material difference between this and the coagulum formed by albumen. In the case of urates it is crystalline, while that of albumen is granular.

It will not be out of place here to call attention to the possibility of laying to much stress on the single fact that there is albumen in the urine, as it has been shown that it does exist in normal urine. The recent work of Dr. Millard, entitled "Bright's Disease," is authority for the statement that in a series of examinations conducted by French surgeons, the urine of soldiers supposed to be in good health and free from hereditary taint, discovered the presence of albumen in no less than eighteen cases out of one hundred.

Permission having been granted to ask a question, Dr. Aulde said, Dr. Tyson has related the case of a patient who was under treatment for some time, but the urine, although examined repeatedly, failed to discover the presence of albumen by the usual tests, but he says that when picric acid was added a coagulum was formed at once. He has further stated that the treatment embraced the use of the salts of potassium, a remedy which is now well known to cause this peculiar reaction when excreted by this channel, and the question is this: was it really albumen, or does the use of these salts furnish still another source of error.

The unusual marked success which has attended the use of the oleates, has prompted the writer to continue his investigations at the Philadelphia Hospital for Skin Diseases, which has resulted recently in the formation of oleate of nickel, and the development of a therapeutic value to the oleate of tin. This new chemical oleate is similar to the oleate of tin, quinine and others, which *I first described* as *salts*, in 1879, before the Pennsylvania State Medical Society, and again in 1881. It was manufactured by Dr. L. Wolff, of this city. It is prepared by the double decomposition of the nickel sulphate and sodium oleate, the chemist using the oleic acid of the U. S. P. in making the latter ingredient.

I might add in this connection that oleates made from the impure oleic acid, the so-called red oil of the candle-makers, while cheaper, are neither certain or decided in their action, and will often set up an irritation upon the skin when the opposite effect is desired. After some years of patient and careful investigation of the oleates, and a comparison of the therapeutic results of the salts made from the pure oleic and U. S. P., and the impure or red oil, has resulted in positive and excellent results with the former, and with disagreeable and very often irritating effects with the latter. I refer especially to this subject on this occasion, as many of the oleates now offered by manufacturers, and from which bad results have followed, are due entirely to the irritating action of this impure oleic acid or red oil.

The Oleate of Nickel, just mentioned, is a greasy amorphous, waxy, tasteless substance having most decided astringent action, almost bordering upon the effect of a caustic. I have tested it upon some chronic cases of the eczema of the extremities in which the skin was hard and of a leathery state, with some good results. The salt was used in from five to twenty grains to the ounce of lard. It is now also being tried upon some old ulcers and cancerous affections of the skin in the out-door department of the hospital.

The oleate of tin already alluded to is prepared by the double decomposition of the tin chloride and sodium oleate. It is of a greyish-yellow appearance, unguent consistence and possesses a metallic odor. It has been found to be of great utility in giving luster to diseased nails that have been abnormal or deficient in their growth. It assists by its local action in overcoming a brittle, split or soft condition of the nails that often follows certain skin affections and external injuries. It forms, especially when combined with a little carmine, an elegant article of toilet for the nails

and surrounding cuticle, giving the parts a beautiful polish. It assists in relieving by its astringent action the ragged and attenuated skin at the base of the nails, or what are known as agnails, that are so often observed from neglecting these important appendages.

FROM WASHINGTON.

The following bills of interest to medical men had been introduced in Congress previous to its recess for the holidays:

Senate Bill 403. Provides for the erection of a brick and metal fire-proof building to be used for the safe keeping of the records, library and museum of the Surgeon-General's office of the United States Army, to be constructed upon the government reservation in the City of Washington, in the vicinity of the National Museum and the Smithsonian Institution, on a site to be selected by a commission composed of the architect of the Capitol, the Secretary of the Smithsonian Institution, and the officer in charge of the State, War and Navy Department building, and in accordance with plans and specifications submitted by the Surgeon-General of the Army and approved by said commission, the cost of the building, when completed, not to exceed the sum of $200,000, the building to be erected and the money expended under the direction and superintendence of the officer in charge of the State, War and Navy Department building.

H. R. 159. Whereas alcohol enters largely into the medicines which are prime necessaries to the sick and afflicted, and is now taxed to a burdensome extent. Therefore, that the tax on alcohol used for medicinal purposes be, and the same is hereby abolished.

H. R. 307. Provides compensation for the services of all volunteer female nurses who rendered service during the war, in the field or in hospital, under the direction and control of the medical authorities of the army, at the rate of twenty-five dollars for each month of service. That the nurses who have received twelve dollars per month shall have an additional thirteen dollars.

Ex. Doc. No. 24. Is a message from the President transmitting a communication from the Secretary of the Navy, inclosing a letter from Surgeon-General Wales, U. S. N., which recommends that a measure be adopted authorizing the representation of the United States at an international convention for the establishment of definite and uniform standards of examination for color-blindness and tests of visual acuteness. To this commission delegates should be sent to represent the several governments interested in the subject.

S. 31. Provides for the establishment of a Bureau of Animal Industry, to prevent the exportation of diseased cattle, and the spread of infectious or contagious diseases among domestic animals. In its sections it 1st, prohibits the transportation of diseased cattle; 2d, fixes the fine at from $100 to $5,000; 3d, provides for the organization of a Bureau of Industry with a chief, to be a competent veterinary surgeon, whose duty it shall be to investigate and report upon the number, value and condition of the domestic animals of the United States, their protection and use, and also inquire into and report the causes of contagious and communicable diseases among them, and the means for the preservation and cure of the same, and to collect such information on these subjects as shall be valuable to the agricultural and commercial interests of the country. The National Board of Health is required to render all necessary aid for this purpose, and, further, two commissioners are to be employed—one a practical stock-raiser, and one an experienced business man. They are to be paid at the rate of $10 per diem., with all necessary traveling expenses while engaged in the performance of their duty. The salary of the chief of Bureau to be $3,000 per annum; and a clerk is to receive $1,800 per annum. 4th. Special investigations of pleuro-pneumonia, or any contagious or communicable disease, to be made to control specially its influence upon the exportations of live stock. 5th. Is a further definition of laws for this purpose. 6th. Requires the Commissioner of Agriculture and the National Board of Health to prepare rules and regulations for the speedy and effectual suppression and extirpation of such diseases, and to invite State and Territory authorities to coöperate in their execution and enforcement. 7th. Makes $50,000 immediately available. 8th. Gives explicit directions to the Commissioners of the District of Columbia for the control of such diseases occurring within the District; and Section 9th makes it the duty of the U. S. District Attorney to prosecute all violations of the act.

S. 338. Appoints Dr. A. Sidney Tibbs, of Leesburg, Virginia, now an acting assistant surgeon, to the position of assistant surgeon in the U. S. Marine Hospital Service, without regard and in addition to the number now authorized by law for such service.

S. 81. Revokes the honorable discharge, June 17, 1870, of Assistant Surgeon Benj. F. Pope, U. S. A., and considers him as having been continuously in the service, and confirms his relative rank and title.

S. R. 6. Provides for the payment of fees to examining surgeons of pensions for 1883 and 1884.

CRAWFORDSVILLE, IND., DEC. 14, 1883.

EDITOR OF THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION:

The article entitled "Retention of Placenta After Delivery in Uterine Pocket," on page 649, issue of Dec. 8, 1883, of your journal, raises an interesting question as to the causes of uterine pockets. I have seen cases where the entire placenta was retained after the delivery of a child by the breech, the uterus contracting down and around until it presented a regular gourd shape, and it was with difficulty I could pass my hand through the portion corresponding to the handle of the gourd to remove the placenta, which I would not find unduly adherent, but seemingly grasped in the contracted walls of the uterus. My theory was, that the head of the child pressing upon the placenta furnished the necessary resistance to prevent that portion of the uterine wall covering

the placenta from contracting and throwing the placenta off. Without the support furnished by the pressure of the child's head, the placenta would furnish much less resistance. Also, in normal presentations, the buttocks or feet of the child might furnish pressure enough to keep a part of the placenta from being thrown off, and cause what Prof. Herrgote so clearly sets forth when he says, "but that it rather results from the non-contraction of that portion of the uterus upon which the placenta was attached, and which was afflicted with inertia, while the remaining portion of the uterus contracted, thus being passively distended over its contents and thinned in its walls, becoming a true hernial pouch on the uterine surface, the constriction to which became more and more pronounced as the body of the uterus diminished in size."

Thanks to Indiana not having a law regulating the practice of medicine, I was called a short time ago to see a lady who had had a quack attend her in her confinement, some 24 hours before my visit. She had been delivered of a healthy child at full term, and I was told it was a head presentation. The placenta being retained, the doctor (?) (who by his advertising sociability and liberality amongst our fun loving part of the community, does a big practice) pulled his coat off. He then placed his patient in the knee-chest position, and introduced a cylindrical glass speculum, and with a pair of uterine dressing forceps removed shreds of the membranes, keeping her in this position one hour and a half. She was then allowed to rest six hours, when he emptied the vagina of blood clots and repeated the picking process—making three hours the woman was kept in that position. When I arrived, the doctor (?) showed me a chamberfull of clotted blood, shreds of membrane, and the cord, and told me that was the entire afterbirth, and advised that the patient be not disturbed. I introduced my hand into the uterus, and detached all the placenta except about as much as a man could grasp in one hand, on the edge, which was firmly grasped by a uterine pouch. By passing first one and then two fingers up into the pouch, I succeeded in removing the entire placenta, much to the surprise of the friends of the patient and the chagrin of the doctor (?) May God speed the day when our women will not be exposed to such dangers —I mean exposed to such doctors (?)

Yours truly,

T. F. LEECH, M.D.

EDITOR JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION:

In your issue of Dec. 15, brief reference is made to a suggestion of Dr. S. C. Gordon, of Maine, that stenographic reports of the discussions held in the various Sections at the annual meetings be provided for.

Such a provision, I feel sure, would well repay the cost. It might be advisable to have the reports edited, either by the editor of the JOURNAL or a proper committee; though even this, probably, should not work a too rigid trimming of matter.

Society reports, to many physicians, constitute the most interesting portion of a medical periodical. Therein are found the prevalent views upon present and living topics—a kind of clinical discussion, we might almost term it.

Often must one regret, when a subject of interest is being handled by some of the weightiest men of the profession, that most of the valuable thoughts are uncollected, running to waste, we may say, for want of competent record.

Many of our best physicians fail, in the rush of work, to write out the observations they are constantly making upon the subjects of the day; but the discussion once sprung, they do not hesitate to engage in it. A stenographer, from this cause, could catch for us some of the very best thoughts developed by our annual gatherings.

Respectfully,

JNO. THAD. JOHNSON.

Atlanta, Ga., Dec. 29, 1883.

NECROLOGY.

SAULSBURY, GOVE, M.D., was born in Mispillionneck, Kent Co., Delaware, May 29, 1815; died at his residence in Dover, July 31, 1881. He was the son of William Saulsbury, a man much respected and honored by his fellow citizens. His mother, Margaret Saulsbury (nee Smith), was the daughter of Capt. Thomas Smith, a lady of sound mind and Christian character.

There were born to them five children, James, William, Willard, Gove and Eli, of whom two yet survive,—Willard, formerly U. S. Senator from Delaware (now Chancellor), and Eli, at present U. S. Senator.

After an academic education, Gove studied medicine, and was graduated in the University of Pennsylvania in 1842. Subject of his thesis: Rheumatism. He commenced the practice of his profession in Dover, Delaware, and acquired an extensive professional business, which he retained to a considerable extent; even when his health was much shattered, he attended to it with great fatigue.

Dr. Saulsbury was an active member of the State Medical Society, and was honored with its highest offices. He was one of the original members who organized in 1846 the American Medical Association. Of these worthies but few now survive.

For 20 years he adhered closely to his profession, when he was elected to the State Senate, of which he afterwards became speaker, and *ex-officio*, Governor of the State on the death of Governor Cannon. In 1866, at the expiration of that *pro tempore* term, he was elected Governor, and in that office he exhibited the ability, decision, and controlling power of mind and presence, which contributed in a great degree to the influence which he continued to exercise in the State during his life.

His efforts in the cause of education were chiefly through the agency of the Wilmington Conference Academy of Dover, of whose Board of Trustees he was President from the time of its organization until his death.

As a member of the Methodist Episcopal Church he exercised so marked an influence, and his interest in its welfare was so appreciated, that he was selected to represent one branch of that church in the General Council of Methodism recently held in London, but which his death anticipated.

Dr. S. was much respected in the community in which he lived. A social and agreeable neighbor, a kind friend to the poor, warm in his attachments, and a devoted and affectionate parent; he has left behind him in his own city and State very many who will hold his memory dear while life lasts.

His wife was the daughter of Thomas Smith; their family consisted of five children, Margaret, Olivia Smith, Gove, jun., Rosa and William. The first three died young; Rosa, a lovely girl of 23 years of age, was taken away suddenly by death; William alone survives. The shock of the death of Rosa was too great for Mrs. Saulsbury's feeble health, and she soon followed her to the grave. Dr. Saulsbury was thus left alone with his son; to him the flavor of life had departed, and trials and disease soon did their work, and laid him beside so many of those dear to him in "the narrow house appointed for all the living."

L. P. Bush, M.D., of Delaware.

Williams, Lewis, M.D., was born in Pomfret, Connecticut, A. D. 1815. He died in his native town June 22, 1881, aged 65, of cerebral meningitis, with hæmorrhage upon the surface of the brain.

He entered Amherst College at the age of 19, but was obliged to discontinue his studies during his second college year, on account of ocular disease.

Upon recovering his health he commenced the study of medicine, and received the degree of M.D. from Harvard Medical College A. D. 1842.

He began the practice of his profession the following year in his native town, where he lived and labored forty years, winning the esteem and respect of all who knew him.

The same year that he settled in Pomfret he married Clara C. Baldwin, of Woburn, Mass., who survives him. This union was a very happy one. Mrs. Williams is spoken of by one who knows her well as "a woman of culture and Christian character. She was an inspiration to him in all his best endeavors, and made his home everything that the word can express, even in its highest and purest sense. Their hospitality was unbounded, yet in spite of the cares incident thereto, this ever active and tireless woman found time to assist her husband in much of his professional work, and he was proud to accord to her a large share in all his honors."

Dr. Williams was an active member of the Windham County Medical Society, the Connecticut State Society, and a permanent member of the American Medical Association since 1855. He was one of the Examining Committee of the Medical Department of Yale College, one of the quarterly visitors appointed by the State to the Retreat for the Insane at Hartford, and one of the Trustees of the State Normal School. He never sought public office, but devoted himself exclusively to the duties of his profession.

He was, however, much interested in the cause of education, and ever ready to do all in his power to assist all the educational interests in his town, county or State.

He was a man of pure character, strictly conscientious in all he did, and deeply impressed with the dignity and responsibility of his profession.

He was also a high-minded, whole-souled, generous citizen of broad culture, as well as a skillful, bold and careful physician. He loved the truth, and therefore detested quackery in all its forms. He was a diligent student to the end of his life, and fully up with the advance of the times.

He possessed in a large degree the confidence of his professional brethren, and his counsels were ever in demand by them near and far.

These calls from his associates, combined with the labors of a very extensive private practice, made his duties numerous and his life one of constant care. Still, although often oppressed with physical fatigue, his spirit was ever ready and willing to work for the benefit of his fellows, and his interest in his chosen profession never diminished.

The news of his death came unexpectedly to his large circle of friends and patrons, and was everywhere received with expressions of the sincerest regret.

The funeral services were held at the Congregational church at Pomfret, of which the doctor was long a consistent and prominent member. The occasion was one of universal sorrow, when all classes in the community, where he was born, lived and died, bore testimony of their love and respect for the good, pure, generous, wise friend and counselor who had been called from them forever.

Chas. H. Pinney, M.D.

Derby, Connecticut.

Whereas, The messenger "Death" has claimed as one of its victims our worthy and esteemed fellow member and ex-president, Dr. James Kerr.

Resolved, That we, the members of the Pittsburgh L. S. Medical Society, attest our sincere sorrow at the death of Dr. Kerr, and our high appreciation of his eminent attainments as a physician and surgeon.

Resolved, That as a society and individual members we shall keenly miss his genial features, his earnest sympathizing friendship, as well as his wise, efficient counsel.

Resolved, That in his death the community has lost a good citizen and a zealous, skillful and painstaking physician.

Resolved, That we extend to the family of deceased our heartfelt sympathy.

Resolved, That a copy of these resolutions be spread upon the minutes of this society, and one be sent to the family of deceased.

John M. Duff,
A. G. Case,
J. D. Thomas,
A. D. Brewster,
Committee.

Pittsburgh, Pa., Dec. 26, 1883.

THOMAS, J. R., M.D., of Bay City, Michigan, was born at Potter, Gates Co., N. Y., Oct. 17, 1827; died at his residence in Bay City, April 29, 1883 In youth, as is common with farmers' sons, he engaged in all the labors and duties of farm life. After acquiring a fair preliminary education, he entered the office of Dr. Charles H. Hoyt, of Potter, as a student of medicine and surgery. He graduated with honors at the Geneva Medical College, at that time one of the foremost medical schools in the State of New York. Soon after receiving his diploma he settled at Ellery Center, Chatauqua county, N. Y., for the practice of his profession. While there he was united in marriage with Emma Hilburt, of that locality, his present widowed wife.

In 1861 he entered the service of the United States as Assistant Surgeon to the 112th New York infantry, and went to the seat of war in North Carolina. After about one year he resigned his position, came to and settled n Bay City, where he has since practiced his profession very acceptably to the general public.

His affiliations with the profession of the State have been very cordial. In addition to his membership with the local societies of his own and adjacent counties, he was a member of the State Medical Society, having been one of its Vice-Presidents, member of the Judicial Council, a delegate to the American Medical Association, (of which he was a permanent member) and also President of the State Medical Society; he had also served two years as a member of the Board of Counselors with the Detroit Medical College. In all of these varied positions he had discharged the incumbent duties with credit and fidelity. He leaves a family consisting of an amiable and accomplished wife and two sons, the eldest of whom is now the editor of the *Jefferson* at Cairo, in this State, and the younger is now a sergeant in the regular service, and stationed at Fort Mead, in Dakota. The many and varied professional stations which the doctor was called to occupy during his life time sufficiently indicate his thorough accomplishments as a doctor of medicine, and his loss will nowhere be more keenly felt than by his numerous patrons.

The general public will attest fully the genial character of his social qualities, and his professional brethren, wherever known, will duly estimate their own bereavement.

His remains were taken to his old home in New York State.

At the meeting of the Board of Counselors of Detroit Medical College, and also of the State Medical Society, following the death of Dr. Thomas, members of both bodies gave expression to their estimate of the high character and sterling worth of Dr. Thomas, of his honorable professional bearing, and integrity and purity of life. Resolutions were adopted expressive of his services to medical science, of the loss to the profession and to those organizations to which he gave strength, and of sympathy to his family. H. TUPPER, M.D.

Forwarded by Dr. W. F. Brisky, of Mighigan.

SWEENEY, W. H., M. D., died at Red Wing, Minn., August 12, 1882, in the 64th year of his age.

Dr. Sweeney was born in Wilson, Pa., Dec 18, 1818, and began his education in the public schools. His father being a practical printer, and editor of a country paper, he early acquired a taste for literary pursuits, and became a ready writer. In 1836 he removed to Illinois, and for the next ten years worked hard on a farm and in a country printing office. In 1847 he began the study of medicine, and soon after came to St. Paul, Minn. Graduating at Rush Medical College, Chicago, in 1857, he returned to St. Paul, but the following year moved to Red Wing, Minn., where he finally located, and became the trusted physician of that beautiful young city. He was true and good in every walk of life, and when he died the expression of sorrow universal showed how he was honored.

He was a careful observer, and prepared many valuable papers for the medical journals and for the Minnesota State Medical Society, of which he was at one time President.

His views on the subject of epidemics, their origin, their relation to each other, etc., were original and striking.

D. V. HAND, M. D., of Minnesota.

VAN DYKE, RUSH, M.D., descended from an old and highly honorable family, whose records go back to the settlement of New York by the Dutch. He was born in Philadelphia on the 9th day of September, 1813, and was the son of Dr. Frederick A. Van Dyke, a noted practitioner, the private pupil of the celebrated Professors Rush and Physick. He died at his residence in New Brunswick, N. J., Sept. 25, 1882.

At an early age Rush Van Dyke entered the family of his uncle, the late Col. James Van Dyke, of New Brunswick, N. J., where he commenced his education, which was thorough and complete. He entered Queen's (now Rutgers') College Grammar School, May 9, 1823. In 1826 he became a member of the sophomore class of Rutgers' College. On account of his youth he retired among the freshmen in October of the same year, and graduated as A.B. in July, 1830, and as Master of Arts in 1833, being a prominent member of his class.

He chose the profession of his family for his vocation, and commenced the study of medicine, under the direction of his father, in October, 1830. He graduated from the medical department of the University of Pennsylvania in the spring of 1835, a far longer period than the great majority of students of the present day allow to elapse between their study of "the first bone" and the reception of their "blue-ribboned parchment."

Very soon after graduation he was appointed to and accepted the post of Hospital Surgeon—an arduous office—on the very extensive plantations in Cuba of the well-known firm of Messrs. Wright, Shelton & Co., in which situation, and in general practice in the vicinity, he remained between three and four years. During his residence in Cuba he perfected his knowledge of the French and Spanish languages and literature, and had enjoyed ample opportunities of observing disease in its most dangerous and rare phases, and of gratifying his desire of studying medicine as a science.

In 1838 he returned to Philadelphia and entered into general practice, where his skill and acquirements soon secured for him the position of medical adviser of many of the leading families. He was, soon after his return, elected to fill the Chair of Professor in the old Medical College on Fifth street, where he delivered annually for several years a series of instructive and exhaustive lectures upon Physiology and Medical Jurisprudence. In September, 1848, he was elected to the Chair of Materia Medica and General Therapeutics in the Philadelphia College of Medicine. An exceedingly able and practical valedictory address to the graduating class was delivered by him in March, 1848, and published by the class. The introductory address of the course of lectures in 1852 was delivered by him and published by the class. On the resignation of Prof. Mitchell in July, 1852, he was called to the Chair of Theory and Practice of Medicine in the same institution.

When the Rebellion broke out Dr. Van Dyke hastened to the aid of his country, and with the assistance of Col. Small was largely instrumental in raising the 26th regiment, Pennsylvania Volunteers, of which he was the Lieutenant-Colonel. The regiment served three years. He afterwards was in charge of the U. S. Medical Hospital at Beverly, N. J., where he was noted for the thorough manner in which he cared for the numerons victims of the war that were gathered there. After the close of the war and a brief residence again in Philadelphia, Dr. Van Dyke removed to New Brunswick, where he continued to reside till his death.

Dr. Van Dyke married Rebecca Beauvard Williamson (one of the daughters of the late M. Williamson, iron merchant of Philadelphia), in 1851, who survives him. They had no children. Throughout life Dr. Van Dyke pursued a characteristically independent course, which became the more marked in its closing years and which, in connection with feeble health prevented him from securing the active practice which his decided ability merited. He frequently wrote on medical subjects and on the passing events of the day. His writings, as well as his addresses, were clear, logical and dogmatic. Though generally exhaustive and sometimes lengthy, he never indulged in circumlocution, but used the plain Anglo-Saxon words that were sure to convey his meaning. One of the New Brunswick daily papers in commenting on his death says: "He was not at home in the practical and busy life of the age. He had but little care for the accumulation of money. Indulged in severe and caustic criticism upon the follies of the day, and freely expressed his opinion upon all charlatanry, whether in his own profession or out of it. For the last three years of his life Dr. Van Dyke has been in feeble health, due to chronic disease (intestinal) contracted during the exposure of the war. He was without doubt a man of great natural ability, and but for the absence of all ambition would have made a distinguished mark upon his times."

He was a member of the Middlesex County (N. J.) Medical Society after 1869, served as its President one year, and two years as its Secretary, and was frequently elected one of the delegates to the State Society. He was also a member and for some years an officer of the New Brunswick Historical Club. He was warmly interested in the affairs of Rutgers' College. He was in 1833 Secretary, and in 1871-72 the Vice-President of the Alumni Association. In the year 1868 he delivered the annual oration before the Association of the Alumni, on "the Philosophy and Educational Requirements of the Age," which was afterwards published by request of the Association and greatly admired as a masterly literary effort. In 1873 he was elected Permanent Chairman of the Standing Committee of the Alumni Association, and filled the position with satisfaction till his death. In a minute adopted at the meeting of the Committee held September 27, 1882, he is thus spoken of: "He was a friend of Rutgers' College, having a laudable pride in her history and growth. He was one of the most active members of this committee, and a faithful representative of the Alumni. He was a gentleman of culture and literary taste, frank and decided in his opinions, and in this minute we desire to record our sense of his loss to us. We have found him prompt and efficient in the discharge of duty, zealous in the cause of education, and ready to co-öperate with whatever might promote the prosperity of his Alma Mater."

D. C. English, M.D.

Forwarded by Dr. R. A. Watson.

Tunstall, Robert B., M.D., born August, 1818, died suddenly at his home in Norfolk, Va., April 1, 1883. He was educated at Norfolk, and at Hampshire-Sidney College, Virginia. He graduated in medicine in March, 1842, at the University of Pennsylvania. His thesis was on Delirium Tremens. He then returned home and entered upon his professional career, in which he soon gained an eminent position, and maintained it for more than forty-one years. Dr. R. B. Tunstall was a man of splendid physique, and was actively engaged in the performance of his duties up to within a few days of his death. Resolutions of respect were passed by the Norfolk Medical Society April 3, 1883. This, and other notices of his life and professional labors, may be seen in the *Virginia Medical Monthly*.

F. D. Cunningham, M.D., of Virginia.

Surgeon-General of the U. S. Army.—The appointment of Robert Murray Surgeon-General, to fill the vacancy occasioned by the death of the late Surgeon-General Crane, has proved highly acceptable to all parties. His rank of Senior Surgeon on the list for promotion, his long, faithful and valuable services, both in times of peace and war, no less than the high order of his attainments, all conspire to render his appointment one eminently proper and satisfactory.

Collective Investigation of Disease.—We have received a supply of the memoranda and cards from the Committee of the British Medical Association, for the investigation of pneumonia, diphtheria, acute rheumatism, and chorea. Those whose names have been sent to this office have been furnished with the necessary memoranda and cards, but there are enough left to supply, at least, one hundred more.

MISCELLANEOUS.

TREATMENT OF GLAUCOMA BY STRETCHING THE EXTERNAL NASAL NERVE.—Dr. Badal has an article on this subject in the *Annales D' Oculistique*, in which he gives the results of 24 cases that have been operated on by him. After discussing the mode of operation, he calls attention to the formulated conclusions of M. A. Trousseau, a student of M. Abadie, and based upon 10 cases, which he accepts. They are in effect:

1. The elongation of the external nasal nerve is a very simple operation, and is not a serious one in its effects. It may, in many cases, be substituted for iridectomy, and particularly for sclerotomy, in the treatment of glaucoma.
2. It succeeds sometimes where these operations have failed.
3. It may often delay the necessity for a more serious operation, such as extirpation or enucleation, and perhaps dispense altogether with the employ of these extreme measures.
4. It can be readily submitted to by patients, as it can be tried without inconvenience, and in case of failure leaves a free field for operations that are practicable directly upon the globe itself.
5. It can be essayed during the prodroma of glaucoma.
6. It relieves quickly the paroxysms of pain in glaucoma, and often prevents their return.
7. It sometimes increases the acuteness of vision.
8. It diminished markedly ocular tension.
9. In case of a negative result with the nasal nerve, it is well to try one of the other sensitive nerves of the orbit.

PERIMACULAR SYPHILITIC RETINITIS.—Syphilis may set its mark on every coat of the eye. The retina may be the seat of a recurrent form of central retinitis as mentioned by Von Graefe. M. Dehenne now believes that there exists another variety of central retinitis, to which he has given the name of "perimacular." The characteristic lesion of this newly discovered kind of syphilitic retinitis appears in the likeness of a hæmorrhage into the yellow spot; but this appearance is the effect solely of contrast. The apparent redness is surrounded by an ill defined area of greyish aspect, and is due to œdema of the retina. The malady sets in rapidly, or after a few abortive attempts. It is a rare affection, and seems to attack only one eye. The treatment should be actively antisyphilitic, but the prognosis is grave; atrophy of the optic papilla may be originated by the disease. Cases seemed to do well under the influence of subcutaneous injection of nitrate of pilocarpin (two centigrammes) used, when possible, in the morning, the patient fasting.—*Lancet.*

Professor Burt G. Wilder, of Cornell University, will deliver the Cartwright Lectures for 1884 in New York City February 2, 4 and 6. The subject will be "Methods of Studying the Brain."

A reception to Dr. M. Josiah Roberts, of New York, was given on Thursday evening by Dr. William H. Daly, of Pittsburgh, in that city. Several of Dr. Roberts' professional brethren in New York, Philadelphia, Chicago, and elsewhere, together with a large number of Pittsburgh physicians, were invited to be present.

LIST OF CHANGES IN THE MEDICAL CORPS OF THE NAVY DURING WEEK ENDING DECEMBER 29, 1883.

Medical Director A. L. Gihon, to the Naval Hospital, Washington, D. C.

P. A. Surgeon, Chas. W. Rush, U. S. S. Colorado, granted sick leave for three months.

NEW BOOKS.

Gross, S. W. A Practical Treatise on Impotence, Sterility and Allied Disorders of the Male Sexual Organs. Second edition. Revised. Philadelphia: H. C. Lea's Son & Co. 8vo. $1.50.

Hermann, L. Experimental Pharmacology; A Handbook of Methods for Studying the Physiological Actions of Drugs. Translated by Roht. Meade Smith. Philadelphia: H C. Lea's Son & Co. 12mo. Cloth. $1.50.

Art, l', de Donner des Soins aux, Nouveau-nés; Parl'Academie d'Hygiène Contre les Maladies du Premier Age et de la Mortalité des Nounissons. 8vo. 24 pp. Paris: Goupy et Jourdan.

Bacon, A. Traitement des Kystes de l'Ovaire par la Poesten. 8vo. 37 pp. Paris: Davy.

Gére, J. M J. Contribution a l'Étude de Certaines Formes de Persistance de la Membrane Pupillaire Simulant des Synéchies d'Origine Pathologique. 4to. 56 pp. Lyon, Duc et Demaison.

Guiard, P. F. Du Rein Mobile. 8vo. 40 pp. Paris: Bailliere.

Guignard, C. Infanticides. Fautil Rétablir les Tours? 8vo. 30 pp. Tours: Mazereau. 1 franc.

Honat, L. T. Des Propriétes Physiologiques et Curatives du Culex Piprens de l'Hydrocotele Asiatica, et Pathogénésie Nouvelle de Viola Odorata. 18mo. 92 pp. Paris: Bailliere.

Jozan, E. et G. Traité Pratique des Maladies des Voies Urinaires et des Organes Generateurs de l'Hommes. Twenty-first edition. 8mo. xvi. 898 pp., 355 fig., et 16 planches. Paris: Marpon et Flammarion. 5 francs.

Larat. Notice sur les Applications Médicales de l'Électricité. 18mo. 36 pp. Paris: Delahage et Lecrosnier. 2 francs.

Rodet, P. Manuel de Thérapeutique et de Pharmacologie. 18mo, viii. 730 pp. Paris: Laumereyns. 7 francs, 50.

Sémené, E. Des Hallucinations de la Musculation; La Conquete du Microbe. 8vo. 24 pp. Vichy: Wallon.

Sunéty, L de. Traité Promatique de Gynécologie et des Maladies des Femmes Second edition. 8vo., viii. 994 pp., 181 fig. Paris: Doin. 15 francs.

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ORIGINAL ARTICLES.

MEDICAL EDUCATION THE FUNDAMENTAL FACT IN MEDICAL ETHICS.

BY ALBERT L. GIHON, A.M., M.D., MEDICAL DIRECTOR U. S. NAVY, PRESIDENT OF THE NAVAL MEDICAL SOCIETY.

[Read before the Section in State Medicine of the American Medical Association, at Cleveland, Ohio, June 5, 1883.]

[NOTE.—It is almost an insult to the intelligence of the readers of the Journal of the Association, to explain that this paper is not intended as a sectarian attack upon the organic law of the American Medical Association; but as this interpretation has actually been given to it by over-sensitive partisans, I deem it proper to reaffirm my loyalty to the code to which I have subscribed, without, however, surrendering the right, which in common with every intelligent man I claim, to criticise what I may think objectionable, and to call attention to the inconsistencies of its avowed adherents, who, attempting to observe its letter, ignore its spirit. I fail to see why honest advocates of its principles should be placed in an attitude of "rebellion" for merely defining these principles by the more liberal light of this day. The code properly interdicts any admission of the orthodoxy of the professors of exclusive dogmas, whether of homœopathy, allopathy, hydropathy, or the like; but it nowhere prohibits the intelligent physician giving *his* advice to whomever may seek it, especially when emergencies and the dictates of humanity demand. No one can more energetically discountenance than myself the impossible co-treatment of any case of disease by an educated physician and a charlatan, empiric, quack, or ignoramus, however regular; but it is quite another matter when one's own opinion is solicited in the interest of suffering humanity. I have yet to hear of any one of our profession soliciting an opinion from any of these, and without such an interchange of views there can scarcely be considered any *consultation*, in the sense of the clinical coöperation properly denounced by the code. Any narrower assumption will, as I have endeavored to show in this paper, necessitate the ostracism of those of our famous colleagues who have associated as fellow medical members with homœopaths and eclectics in the professional work of the National Board of Health, State Boards of Health, Boards of Medical Examiners, etc.; and I feel assured that the overwhelming sentiment of the American Medical Association will be in favor of the liberal interpretation I have here given the code, with the previous knowledge and approval of the Surgeon General of the Navy.]

Superficial observers see in the question which has arisen in the State Medical Society of New York, only an attempt to break down the guards which hedge in the kingship of our profession. They have, indeed, proclaimed afar that the time-honored traditions of the guild are to be ignored, and the right hand of fellowship given to the accursed unbeliever. A year has passed since this question arose, and the dignified body of which we are a part evaded meeting the issue face to face. A few voices were raised in explanation, but they were drowned in the cry, "Crucify him! crucify him! He breaks bread with a homœopath." The august fathers of the Association frowned their displeasure, and the venerable idols of antiquity were taken down from their dusty niches, and displayed to exorcise this new demon of the nineteenth century. Outside the halls animated ex-parte statements were circulated, and a thousand delegates went away believing that a few individuals in the city of New York, mainly specialists, for purposes of personal profit, were advocating the license to consult, confer and coöperate with avowed homœopaths—this and nothing more. Since then the matter has acquired a newspaper notoriety, and it is blazoned to the world as a fact that the delegates of the State and County Medical Societies of New York have disqualified themselves for association with us, because they have sanctioned the formal recognition of homœopaths in clinical conference, and the popular sympathy of the profession has been aroused against these mercenary innovators.

It is, of course, the business of the Judicial Council "to take cognizance of and decide all questions of an ethical or judicial character that may arise in connection with the Association," but every member of the Association has an equal interest with these twenty-one in the inquiry into the causes which have induced some of the most exemplary members of the profession to their course. Is it, as alleged, that the Code of Ethics is an antiquated piece of verbosity? Does it really accomplish what it proposed? Undoubtedly, its purport was the exclusion from professional fellowship of all but those who are entitled to it by their intelligence, their education, their professional skill and acquirements, and that fearless probity that doth become a man. Has it done this? Does it do it to-day? Are there intelligent, educated, skillful and upright men in the profession because of the Code, or in spite of it? It is unquestionably true that there are no homeopaths in the American Medical Association, but are there any *allopaths* there? Does it say "Brother" only to those who are fit to wear the mantle of the wise physician? These are questions for the Association to ask itself, and primarily it is for the State Medicine Section, in its purview over medical education, to discuss calmly, fearlessly and thoroughly, and to go with its conclu-

sions, and announce them to the Association, however unpalatable or unpopular.

I do not propose at this time any formal criticism or arraignment of the Code of Ethics. Practically three lines only are the shibboleth which the elect are required to utter: "No one can be considered as a regular practitioner or a fit associate in consultation whose practice is based on an exclusive dogma." Prior to this it is stated that "a regular medical education is presumptive evidence of professional abilities and acquirements," but you may search the fifteen pages of the Code in vain for the definition of what constitutes a *regular medical education*, and it is to this I now propose especially to limit my inquiry —whether, while straining at the gnat in the twelfth, thirteenth and fourteenth lines of Sec. 1, Art. IV, we have not swallowed a camel in the other eleven. I leave to others the question of the purpose or propriety of the sonorous chapters "On the Obligations of Patients to Their Physicians" and "On the Obligations of the Public to Physicians." The short time at my disposal will only enable me to endeavor to demonstrate the failure of the Code to define as rigidly what constitutes that regular medical education, which makes the physician, as it determines who are to be his fit associates. During a few minutes, at the close of the last annual meeting at St. Paul, I had occasion to refer to this matter, in connection with my proposition that it was our duty not to let down any of the bars which guard our entrance, but to put others up; not to admit into the flock any irregular black sheep, but to exclude the horned and bearded goats already there, clothed in ill-fitting suits of regular white lambskin; and I hastily read some extracts from a paper on Medical Education I had prepared for the Association about ten years ago. I had then just been relieved from duty as a member of the Naval Medical Board of Examiners of candidates for admission into the Medical Corps of the Navy, and the daily evidences of utter incapacity I had read, heard and witnessed from men, "who having had that regular medical education which," in the language of the Code, "furnishes the only presumptive evidence of professional ability and acquirements, and is the only acknowledged right of an individual to the exercise and honors of his profession," determined me not to rest until I had brought these facts before the Association. Orders to sea prevented me carrying that intention into effect, and on my return I learned that the paper had been lost, and it was only recovered by me a few days before our last meeting. In this paper I have collated some of the evidences of professional inability of men, who bear diplomas from honored institutions, and who, at the date of their examination, had been some one, some two, some three, and some six years exercising our profession, with all its honors, invested with all its responsibilities, admitted to fellowship in this Association, and duly guaranteed as fit to consult with or be consulted by any of you, without fear of soiling your professional ermine. The incredulous may verify my statements by consulting the records, whence I have obtained them. I have not specifically named the schools on which these wiseacres were grafted and blossomed, since my object has not been to make invidious comparisons, but to demonstrate how shallow the crust on which the foundations of medical education have been erected, and the absurdity of addressing fifteen octavo pages of a code of ethics to such as these, the majority of whom never read it, are not even aware of its existence, and could not understand it if they were. Is it at all credible that the man, however regular he may be certified, who informed the *Navel medicle bord* that "*the blud should be clened of its impurrities every spring*" can comprehend these well-turned sentences and lofty sentiments? Doubtless, he would, with orthodox fervor, execrate the *homeepaths*, even though, in the next breath, he proclaimed himself a *reglar alleepath!*

Before all, however, it is proper that I should satisfy you of my own right to sit in judgment, and to do this I must first explain that the conditions for admission into the medical corps of the navy are not of any exceptional or exclusive character beyond the limitation of age between a minimum of twenty-one and a maximum of twenty-six, but are merely such as should be fulfilled by any young man, who is certified in classic diction by seven or more distinguished professional elders, to be *doctus in arte medica*, learned in medicine. The prerequisites of respectability of character and correctness of deportment, established by testimonials from citizens of known probity, ought not to be considered superfluous, even for the matriculant, while the modest scholastic acquirements insisted upon, rarely extending beyond a rudimentary familiarity with orthography, grammar, geography and arithmetic, are not a tittle of what ought to be necessary preliminaries to the study of the first bone. The possession of a degree is not required, as it undoubtedly ought to be, and would be, did it carry with it any assurance of professional qualification, the Code of Ethics to the contrary notwithstanding. Why a degree, however regular in origin, is not considered satisfactory evidence of professional qualification, I expect to abundantly illustrate in this paper. Furthermore, the catholic liberty to compete for any position under the government, has not allowed the Board to decline to accept the candidacy of any individual claiming the ability to practice our art, and accordingly we have examined graduates of eclectic colleges and homœopathic colleges, as well as those who did not graduate at any college, who were thus permitted to stand on the same footing with the possessors of sheets of parchment containing their names in a form they would not recognize and in a language they could not interpret. Though all such *irregulars* have failed to pass our examination, it is but just to state that the files of the Department will show that they had no lack of peers in ignorance among the alumni of institutions of the most renowned name and unassailable regularity; and I fail to see how the Board in any way countenanced these practitioners of an exclusive dogma, or lowered the prestige of our own exclusive possession of the only true faith by consenting to demonstrate to these pretenders that they were really ignorant and incompetent. Had the door been slammed in their faces, would they have carried away with

them as lively a sense of their shortcomings, as when the opportunity had been given them to write themselves down asses?

A few words now as to the nature and routine of these examinations by the Naval Medical Board. After the physical inspection of the nude body and the written certificate of the candidate that he is free from inherited or undiscoverable disease, he prepares a biographical sketch, describing his academic and medical education, enumerating the authors read, and detailing his opportunities for acquiring practical acquaintance with any branch of his profession, especially his hospital and other clinical experience. After this, which is usually the work of one day, the formal professional examination begins, and comprehends—

First: An ESSAY, written without notes or references, within an allotted time, the subject ordinarily selected being one with which the candidate, in his preliminary letter, has shown evidence of most familiarity.

Second: The preparation of WRITTEN ANSWERS to fifteen questions propounded in writing, three in each of the following branches: (1) anatomy and physiology; (2) chemistry, hygiene and jurisprudence; (3) materia medica and therapeutics; (4) the principles and practice of surgery; (5) the principles and practice of medicine. These questions are purposely selected to cover as wide a scope as possible, and so serve as introductory texts for the oral examinations. All the written work is carefully scrutinized as to orthography and composition, the errors being indicated by red ink marks, and is filed at the Department as evidence against the candidate, in the event of the dissatisfaction of himself or friends.

Third: ORAL EXAMINATIONS, each about an hour in length, by the several members of the Board in rotation, on all the subjects within the domain of the properly educated physician, including the principles and practice of obstetrics, and forensic medicine, and cursorily on such subjects as may be judged necessary to determine the general proficiency of the candidate.

Fourth: PRACTICAL EXAMINATIONS in the recognition of drugs and pharmacal preparations; in the arts of prescribing and of compounding prescriptions; in the chemical examination of water, urine, etc.; in the uses of surgical instruments, the application of apparatus and the performance of operations and demonstrations upon the cadaver; and in clinical exercises in the wards of a hospital, the use of the laryngoscope, thermometer and other diagnostic apparatus, and the preparation of a written commentary on some one of the cases there examined.

The candidate has the privilege of introducing a friend at any stage of the oral examination. It is a courtesy seldom refused for him to be allowed to withdraw at any time, as it is the privilege of the Board to dismiss him whenever they may be satisfied of his failure. The examination concluded, his qualifications and standing are determined by a majority vote.

Further prolix detail is probably not necessary to satisfy you of the process by which these replies were elicited which I am about to read, a process to which I insist every person should be subjected before he is allowed to practice medicine.

I have selected from my notes samples of the replies of twenty-five candidates, *doctores* all of them, men certified to be learned in that noblest of all the sciences which engage the human intellect. I have endeavored to range them over as wide a field of inquiry as possible, to show that it was not abstruse or theoretical points on which the deficiencies were manifested. I have taken them from the graduates of schools in every section of the country, and those of established reputation, in order to prove that no one school, however exalted its rank, can claim exemption from the charge of having graduated grossly illiterate and incompetent men, and that diplomas have been sold, not cheaply and openly, as by Paine and his fellows, but still for a price, meaning two full sets of tickets, a matriculation and a graduation fee. I cannot, of course, say how many of these candidates actually fulfilled their implied contract to attend lectures by sitting wearily on benches listening to discourses that must have been totally unintelligible to most of them, because I am not unjust enough to intimate that these professors did not honestly and faithfully fulfill their part by lecturing, but I do declare that their words fell like idle wind upon hearers such as these, and that the dolt who sat there throughout the course, or part of it, or who did not even sit there, but bought the ticket, issued forth a full-fledged doctor, the peer of the brightest, most industrious, and most zealous student in the class. I do know of one instance which came to me in the shape of an indignant protest from a very accomplished physician at Yokohama, that an Englishman, who had been my apothecary for two years at Nagasaki, had taken the March steamer for San Francisco, and returned by that of July with the diploma of a regular medical school, which he displayed among his countrymen, to the great scandal of American institutions. I know that this man, a fair compounder of prescriptions and with a midwife's experience in obstetrics, had less right to practice our art than the Mrs. Gamp whose functions he had occasionally usurped; yet he was admitted to examination(?) after paying for one course of lectures, and pledging himself to produce a certificate from the London hospital in which he said he had studied and served. I do not know, nor have I sought to inquire into, the antecedents of any of the candidates whose replies I am about to quote. With these the Board had little or nothing to do. Our business was simply to ascertain whether A. B. was properly educated in his profession to be fit to be intrusted with the care of the officers and men of the naval service. Some of the revelations of these examinations would be amusing, were it not the lamentable fact that many of their authors have been for years intrusted with the lives of their fellow-beings, and this by the authority of the most respectable regular medical colleges in the United States.

To begin with the original seat of medical learning in this country, a graduate of one of its great schools, whose diploma was five years old, who had been recently prepared for examination, and whose demeanor evidenced the high opinion he entertained of his own

abilities, stated that "the corpus callosum is that part of the dura mater which separates the cerebrum from the cerebellum;" that "the vertebral artery communicates with the cavernous sinus;" that "the membranous part of the urethra is below the triangular ligament, which is an extension of Gimbernat's ligament;" and that "pneumo-thorax is a collection of pus in the chest."

A second from the same institution, four years graduated, informed us that "the principal muscles of the larynx are the vocal cords;" that "the one-seventieth of a drop of hydrocyanic acid is the dose for an adult, and the tenth of that the proper quantity for a child;" that "the boiling point of Fahrenheit is about 300°, that of the centigrade scale not so high, and that of Reaumur higher;" that he "could not tell what the zero of Fahrenheit was without having the other scales before him;" and that "the normal temperature of the human body is from 112° to 140°."

Still keeping among the "doctors in medicine," the learned ones of our profession from this same school, a regular of regulars, we find a graduate who had left the benches only two years, declaring that "cholera communis is communicable cholera," and "it is a disease of the sea coast of warm climates, occurring generally in the Gulf of Mexico, with a geographical limit of from 20° S. to 10° N.

From a sister school in the same city came a gentleman well provided with testimonials of his social, literary and professional qualifications for the Naval Medical Corps, who stated "that he did not remember the country nor the language of Hippocrates," that "Galen lived before him," and "Virgil died in the fifteenth century of the Christian era."

A brother alumnus, whose diploma was only a year old, declared that *the hole in a sample of Russian rhubarb* shown him *was natural and grew there;* that "accupressure is made with the finger or any other instrument," that "the laryngoscope is a short tube, which you put in the throat and look through;" that "the tuberosity of the tibia is the part broken in Pott's fracture;" that "ranula is a disease of the eye," *he could not tell which eye;* that "internal hemorrhoids are to be chiefly diagnosed from fissure of the anus;" and that he did not know the difference between chordee and priapism, nor could he tell what either was, other than that it was similiar to stricture.

It was a graduate of this same school, who, indeed, brought letters to me from an esteemed friend and deservedly distinguished physician in Philadelphia, who, having absented himself several days during the examination, on his return announced to the President that he had been ill with *cholera infantum*, and gravely reiterated the statement, when with some astonishment, I repeated the inquiry.

New England sent us a candidate who had been practicing medicine almost six years, who informed us that "nitrate of potassa is *insoluable* in water;" that "chondrus is isinglass and is used to make blanc mange;" that "liq. sod. chlorinat. is the chloride of lime;" and that insanity is a strictly mental disease, he did "not know that it was ever regarded as a physical disease."

Also from this section came an aspirant for the corps who was born and educated in Vermont, *wher I studed Latin grammer*, and, who, after certifying that his *helth* was good, stated that "orchites or Inflammation of the Testicls is produced by external ingurya manely although occasiunly it is produced by internal difficultys the Symptoms are pain through the lumbar regunn through the Kidneys and down the spermatic Cord. The Diagnosis is that it is so and also swelled. The Treatment is to Suspend the Scrotum by means of a Scrotal bag supporter. bathing the part freely with cooling lotions and Cold water to allay the Heat—and Inflammation as rapidly as possible, A low diert, avoiding excitment as far as possible if the Pains is to seveer an occasiunal anœsthetick should be givn to relax the muscle as well as giv rest to the Patient if the Inflammation does not subside but incesans the operatiun of extirpation of one or both of the testes must be submitted too. being the last and only resurse to be had that can possibly save the Patient."

Bear in mind, gentlemen, that this worthy possesses a diploma of no insignificant medical school certifying that he had had that regular medical education which is the only presumptive evidence of his professional abilities and acquirements, and is thereby entitled to the exercise and honors of our profession.

Hear further: "Scarlatina is an eruption on the Fæceis. or Face and Head It is divided into three symptoms Simple mideum and Malignant, The simple form is known by eruptions on the Face, Fever, the eruptions of a scarlet coler and small and Genelle lasts not more than a week. The mideum is like the simple save that the fever is higher and the spots larger. occasiunly attended with soar throat. The Malignant variety is the hardest form the fever running high and the Blotches genelle extending over the whole body with a Gray Sloughy soar Throat. this variety generly terminates in Death in a few days unless checked. by Mental, depression."

And again: "The temperature of the system is variable in helth the cuticle stands at 70°. the Dijestive organs at 100 before they act on the Ailment, Any great deviation frum this state denotes that the Patient is a Pathological condition. and that the Saliva being a powerful Alkaline, with phosphate Sode it base it causes a fermentation of the Ailment The Saliva is much stronger after than before a meal. It also renders assistance in the action of passing the Ailment through the glottis Œsophigus Thorax to the Stomach."

If you feel inclined to laugh at this tissue of absurdities, recollect that it is your professional brother and peer to whom I have introduced you. Rather shed tears for the poor wretch he may have castrated to save his life. A thousand times better for humanity had he drawn his inspiration at the Hahnemannian fountain, and prescribed trillionths and decillionths of carbo, spongia and sambucus.

A representative from another New England school announced that "phosphorus burns and makes nitrogen gas;" that "the crepitant rhoncus occurs whenever a membrane becomes dry;" and as a part of his academic education, that "Plymouth was settled

by Columbus, who gave the town its name;" and that "each State and Territory has one senator, who is a man of great influence," one of this great influential body having in fact indorsed this learned doctor's competency to assume the care and responsibility of the sick of the navy.

A very elegant young gentleman from New York, graced with all the accomplishments characterizing fashionable society pets, who had an office in one of our great cities, where, though the navy failed to appreciate his worth, he subsequently rose to a lucrative practice through the patronage of wealthy friends, said that "orchitis is a disease of the testicle affecting one of its coats, called the vas deference, which he believed was the external and was a serous tissue;" that "erysipelas is known by its shiny look, that it is confined to the head, and terminates by suppuration or by getting well;" that "the hot bath should have a temperature of 75°;" that "the hyaline appearance of tube-casts refers to their hair-like structure;" that "a microscope of one thousand powers is required to see a blood corpuscle;" that "the symptoms of delirium tremens, of which I have seen numerous cases, are dilated pupils, hot dry skin, slow pulse, and glassy eye;" and "that puerperal convulsions require diuretics at first and then diaphoretics, such as pulvis ipecacuanha compositi ℥j divided into six powders and taken every two hours until profuse sweating is produced, and if this does not succeed in sweating her, let her drink hot tea and give her a Russian bath!"

Another, also a practitioner by authority of the same renowned institution, stated that "a poison is any substance that acts as a local irritant upon the mucous surface and thus produces congestion of the brain;" that "acupressure may be pressure by a tourniquet, by a V-shaped bandage, a pad, or by the hand;" that he had always used stimulants, and liked the way his patients built up under them, although he *wholly condemned them as a beverage*, and added that "they ought never to be used in lung disease, for they increase the action of the heart."

A candidate likewise from this school, and whose right to the doctorate was doubly guaranteed by a previous diploma from a western university, in a theme of twenty-five lines on the assigned subject of "The botanical history, physical characters, chemical constituents, physiological action, therapeutic applications, and official preparations of jalap," stated that: "It is a small plant which grows from one to two feet high. There is nothing peculiar about its chemical properties, with the exception of a slight astringency and pungent bitter taste. The root, as found in the market, is about the size of a crow-quill. It acts by increasing the secretions of the *mucus membran* of the intestine. It may be used in any case where the action of a slow cathartic is required. It is also thought to increase the amount of secretion of the *mucus membran* of the lungs."

He said of hydrogen that "the danger attending its manufacture is from the danger of inhailing the gas whic is very injurious to the lungs and it is also exposive thereby causing more or less danger."

He also stated that "the antidote in poison from strychnia is physiologically belladonna, but a dose of the belladonna that would counteract the effect of the strychnia would *kill the patient*;" and that "the coats of the eye are the conjuntava sclerotic and choroid. The conjunctava is a mucus membran, It contains blood-vessels and nerves, The sclerotic membran is a dense white membran containing no blood-vessels, The choroid membran is not as dense as the sclerotic. The aqueous humor is not as thick as the vitrious, It occupies the anterior chamber. The vitrious humor occupies the posterior chamber."

A graduate of another deservedly celebrated New York school announced that "Galen introduced vaccination or inoculation in the seventeenth century, and that Aristotle was some ancient philosopher who wrote a book," probably intending that "masterpiece" which naughty youths delight to read, while still another New York M.D. explained that "The conditions which would render Bronchotomy necessary. would be wher a foreign body has lodged in one of the bronchial tubes. I know of but one method of performing it and it is to cut down carefully being giuded by the physical signs and your anatomy, and after severing the bronchial tube in a longitudinal direction I would remove the foreign body, and carefully close up the wound;" that "an astringent is a medicine which corrogates or contracts the tissues;" and that "to determine acurately whether a person be dead or not, a knowledge of anatomy and physiology is essential. One of the surest signs of death is conplete cessation ot the heart's action accompanyed with a cold surface of the skin. a blueness of the lips and fingers. and a *coldness of the teeth.*"

A doctor from a third New York college wrote as follows: "Scrotal hernia is where the intestine passes into the scrotum when it sometimes becomes of enormous size. The prominent symptom is a non inflamitory swelling of the groin and can be diagnosed from other swellings by the impulse conveyed to the fingure when placed over the tumor by coughing." "The pathology of surgical fever is a poisnous condition of the blood caused by the absorption of some poison from a wound or injury. This poison is carried by the sirculation to the nervous system and different organs of the body causing a general febrile action;" "Gonorrhoa is caused by a spesific poison generated by filth and excess of secual intercourse and by actual contact;" "Malaria is an invisable poison invading the air." This gentleman introduced many orthographical novelties in his written work, such as *spunging, annemia, coraccer bracheal-ius, fassia, abdoman, thygh, plexas, alumn, superation, accute, arrises frome betwene, shure, wair, beleaving*, etc.

Next after Philadelphia and New York, Maryland has supplied the largest number of applicants for admission into the medical staff of the navy. One of these, a graduate of seven years, informed us that "The phenic nerve is one of the cranial nerves, I don't recollect which pair;" that "The mind has more action on the cerebrum than on the rest of the brain;" that "The surface of the heart is a mucous membrane;" that "The temperature of the body in African fever is 96°, much above the normal temper-

ature of the body, which is 92° F;" and he wrote a prescription for an emulsion of copaiba containing more than twenty errors, the Board requiring prescriptions to be written without symbols or abbreviations:

"Ricipi

Copaiba Drachmæ quarto
Pulvis acacia
Sachrum Alba aña Drachmæ duo
Aqua Distilata Ouncæ quarto
Oleum sasafrass gutta viginte

Mice

Signa One Tablespoon 3 times daily."

The same alma mater sent us one of her sons whose fluent pen has largely contributed to our medical literature. The same pen in the written examination, beyond which we did not think it necessary to go, was made to state that "The larynx extends from the base of the skull to opposite the fifth cervical vertebra, where it divides;" that "The most simple form of the galvanic battery is that discovered by Buvens, of Leyden, and called by him the Leyden jar;" that "one of the common sources of Ammonia is Phenic Acid, a natural secretion from the beaver;" that "The gastric juice is one of chemical solution, and the vital attributes of the stomach are only employed in the preparation of the solvent; that "The gastric juice exists in most animals as hydrochloric acid, necessary for their digestion;" that "Food enters the stomach in successive curves by a peculiar peristaltic motion of the stomach acting through the fibers of its muscular coat;" and that "In the treatment of Measles you regulate the secretions by small doses of mercury and epispastics, astringents and farinaceous diet, and if the type should be malignant, we would relieve the congested organs as speedily as possible by venesection or by local depletion, together with good diet."

Another informed us that "Senna is indigenous, growing in the West Indies."

Still another, that "The Greek language is spoken by the people of the Isle of Greece, which island is southeast of Italy; that "Ovid flourished several centuries before Christ;" and that Longfellow is a great English poet."

A fifth defined coxalgia to be *inflammation of the coccyx.*"

A graduate from another school in the same State said that "There are two varieties of senna—Alexandria and Teneriffe;" that "The Technical name of Rhubarb is Colombo;" that "Jalap comes from Spain," and that "The Apothecaries' Weight there are sixteen ounces to the pound."

Another, who was graduated from the same institution four years before, and who was at the time of examination a leading practitioner and the city physician of a western municipality of considerable pretensions, stated that "Opium comes from Egypt and Asia Minor and Hindostun, but not from India;" that "Aloes is the gum of a tree growing in South America. There are two varieties of Aloes in use. The best is Soccotrine Aloes from South America—this variety costs much more but on account of its effects is more extensively used. The other variety the Cape Aloes of commerce is the inferior of the two and is brought from parts farther north than the Soccotrine variety;" that "Chlorine is a very poisonous gas of a blue color;" that "The difference between Galvanism and Electricity is that one is the substance itself and *the other its use;*" that "The galvano farriadaic company, of New York, are furnishing excellent machines;" that "I do not know the difference between primary and secondary, interrupted and continued currents;" that "In gonorrhœa we use strong injections to destroy the poisonous matter before it gets beyond the glans;" and that "To determine personal identity in a case of questionable personification, we should collect all the reliable evidence possible, and if not satisfied by thorough examination of the facts of the case, I would Chloroform or etherize the questionable party and judge from his expression when unconscious.

A representative from a school in a district farther south wrote that "The ureter is the duck of the kidney;" that "sporadic disease is locally a kind of epidemic;" that "Brandy is a vital stimulant and so is beaf essence;" that "The ordinary dose of Chloroform as an anæsthetic is ℥j of ether ℥ij;" that "The average respirations are 70 per minute;" and that "I believe there is a slight difference between the inspired and expired air."

From still farther south came a physician who declared that "Carron oil is so called on account of its bad smell;" that I dont know what is meant by colica pictonum; that "The period of utero-gestation is nine lunar months;" but that he "could not tell how long a lunar month was, nor why it was so called."

Finally, from the west we had a graduate of unimpeachable regularity, who said that "Campher is an aromatick gum from the ilands of the see;" that "The carotic arterie makes its exit between the 1 and 2 ribs and enters the cranial cavity through the petrous portion of the temporal bone;" and that "The best way of facilitating the expulsion of the placenta is to let the woman walk about the room, allowing five minutes to elapse after delivery before requiring her to get up and walk."

These examples were not especially collected for my present purpose. I have merely used such as I had casually jotted down among my memoranda. The notes of my colleagues and the archives of the Bureau of Medicine and Surgery can supply thousands of instances of professional incapacity where I have noted a hundred, and my successors of to-day upon the Board are having the same experience. Within a week one wrote me that "The comic opera and minstrel performances are nothing compared to the Board entertainments." Think of a candidate—a graduate, and a regular graduate—gravely informing us that "*Phimosis is the result of old age.*" Ridiculous errors in orthography, inexcusable in a day-laborer in this land of boasted educational facilities, are so common that one might believe correct spelling to be a refinement of culture. "What the hell has spelling to do with the practice of medicine?" demanded an irate Member of Congress of the Chief of the Bureau, Dr. Whelan, on being shown his protegé's written work, and doubtless so thought the

trustees of a charitable institution widely known, who admitted into its resident medical staff a gentleman, the medical graduate from a university, who two years subsequently gave the Board the following written evidence of his literary acquirements, viz.: *immergencies*, *attact*, *thare*, *redy*, *vigitable*, *xertion*, *urin*, *pluracy*, *deadly knight-shade*, and *expultion of its contence*. Without questioning that there are intellectual giants who achieve greatness in certain careers, though unable to spell at all, it may be doubted whether the average mind accustomed to write *scassity*, and *orful*, and *inturlec* and *aurora epileptica*, in total ignorance of their etymological significance, can ever succeed in comprehending the language which has come to be technical in every department of our science; and only errors such as these, and not mere phonetic mistakes have, of course, been taken into account. Indeed, we did not decline to examine the candidate who addressed his letters to the *Navel medicle bord*, and subscribed himself *yours respectively*, and I do not believe he was one whit the inferior of the regular graduate who this very year addressed the following epistle to Dr. John H. Rauch, Secretary of the State Board of Health and Medical Examiners of Illinois:

"To the *Secratary State boar* of health *Deear* Sir I sent you my *dipluma* early last March and have not heard from it *sinc* did you receive it or do you know anything about it I am become quite anxious concerning its *safty* My *dipluma* is from ——— Med College ——— ——— dated ——— —— 1882 I also sent you a letter containing a one dollar bill to pay for the *certifficate* If you will give me the information I *requist* I shall be greatly obliged to you Yours respectfully ——— ——— M. D."

Show me in your Plan of Organization, or in your By-Laws, or in your venerable and venerated Code, which it has been declared to be "rebellion" even to criticise, one line denying that regular graduate admission here on terms of equality with you all, if indeed he may not be here already.

But errors in orthography, faulty grammar, and the absurdities and senseless incoherencies of the oral examination, pale beside the display of ignorance during the practical examination. I have seen the spermatic cord demonstrated in a female subject; the structure of an entire limb torn up in the search for a superficial vessel in open view of the operator; the anterior tibial sought on the inner side of the bone, and again through the sural muscles; the posterior tibial ligated at the external malleolus; and the palm boldly laid open by a long, deep incision to secure the radial. I have witnessed the application to fractured limbs of apparatus that would have deformed the sufferer for life; prescriptions written that no apothecary could decipher or compound; and others compounded either with fatal doses deliberately prescribed, or ignorantly and carelessly weighed, which it would have been eminently proper, in the interests of humanity, to have required the exhibitor to have swallowed. Yet these were all the acts of men who had received that accepted "regular medical education" which makes of them the elect, who have the "acknowledged right to the exercise and honors of our profession." I appeal to these very Professors, who signed the diplomas of these men, whether any practitioner whose practice is based on an exclusive dogma, could rival in ignorance that regular doctor, who, having amputated through the thigh, regarded the stump sharpened like a lead pencil, and coolly remarked, "Why, I must have made my cuts the wrong way!" Can any Code of Ethics exalt him into a position fitting him to be consultor or consulted with, even by a homœopath; or him, who having a superabundance of flap in an amputation through the arm, neatly tucked in the superfluous ends and deliberately stitched the folded cuticular surfaces in apposition; or him, who having attempted a disarticulation through the tarsus, delared that he would allow the protruding cuniform bones to remain *until they skinned over*; or him, who having advised the operation of trephining, minutely described the method of introducing a silver plate in the cranium, the bone being carefully grooved to receive the plate in the fashion of a watch-glass; or him, who on the morning of his graduation, when requested by an old physician to bleed in a case of emergency, plunged his lancet on the cardiac side of the bandage; or him who proposed to treat orchitis by removing one or both testes, if the inflammation does not subside after rest, cold applications, and occasional anæsthetics; or him, who defined pneumonia to be a particular disease of one lung, and pleurisy the name given to it when it affected the other side; or him, who advised cauterization of the soles of the feet in congestion of the brain, using the actual cautery for poor people, and the potential cautery, by which he meant nitrate of silver, for rich patients, that they might not be discommoded *by the smell of the burning flesh!*

I do not want to be misunderstood as arrogating for the medical corps of the Navy, even by implication, any superiority to the average general practitioner. We do not pretend that any of our number has any claim to but the humblest seat in the medical forum, but we have striven, and I believe not in vain, to exclude from our rolls every one of these arrant fools and worthless graduates, who, not having succeeded in entering the Navy, where it is popularly supposed neither skill nor acquirements are essential, must remain in civil practice, slaughtering the unfortunates who fall in their power, and adding their share to the mantle of shame, in whose folds the whole profession is involved. Though we have no statistics of the future careers of those who have voluntarily left our ranks, nevertheless we can point with pride to the large number of ex-naval medical officers, who are now occupying distinguished positions as editors, teachers and practitioners.

Of 1,141 candidates for the medical corps in the twenty years since 1853, only 370, or about 32 per centum, have been accepted. Admitting that 10 per centum of those rejected might have been accepted by less rigid examiners, or were causelessly and improperly rejected, there still remain 700 graduates of regular medical colleges who can give the sign and pass-word that admit them to the benches on which sit Bowditch, and Agnew, and Gross, and the Flints, and Fordyce Barker, and all our other

great men. Many of these seven hundred have, doubtless, through native ability, industrious observation, and after study, learned something of the art they began to practice in the dark, but most of them have only learned to see as the blind see, and at what a fearful cost of human life!

Mr. Chairman:—The time has come when this Association must be up and doing. A few medical schools have undertaken the reform, but the movement that has been inaugurated notably by Harvard will avail little so long as the Association unconcernedly witnesses and indirectly countenances the wholesale manufacture of doctors elsewhere, by accepting their membership without question of their competence. The time has come when something more than paper bulwarks shall be considered defense for our orthodox stronghold, and paper partitions sufficient to separate the sheep from the goats. The time has come for us to act, and it is eminently proper that the Section in State Medicine shall be the scene of action. The dissension in New York has made it impossible for us to remain indifferent spectators. I trust no member of this Section has been misled into believing that any of the distinguished men who have taken part in this agitation have asked for anything that involves in the least degree any concession to the claims of homœopathy, allopathy, or any other exclusive dogma; that none of them have suggested, advocated or desired any arrangement that can provide for or permit the joint clinical treatment of any case by themselves and homœopaths, or any other paths. They have, however, claimed the right to give *their* opinion to any one who asks for it, and is willing to pay for it, to tell any sick person what *they* think of his case, and what *they* advise to be done. In this they give no sanction to the "irregular," whoever he may be, who has sought their advice, even though this irregular may be wiser than that regular who castrates in orchitis, and gives his puerperal woman a Russian bath. The very fact of their advice having been sought is an admission on the part of the irregular that he has done wrong or knows not what to do, and if, as alleged, these irregulars have not sought these so-called consultations, then none will be, and the storm is but a tempest in a tea-pot, since it is very certain that none of us will ever ask or accept, or care to know what they believe. It is for you, however, to determine decisively whether you will place under the ban the man whose only offense has been to say to one of these irregulars, "You are doing wrong," or will exclude from the ranks of the profession that one of your distinguished colleagues in New York, who, when called in consultation in a case of difficult labor requiring instrumental interference, did not stop to examine the diploma of the attending physician, but went to work, finding him an exceedingly expert assistant, and learned, when the patient had been rescued from danger, that he had been coöperating with a homœopath; or will threaten the young road surgeon, who, at the close of the meeting at St. Paul, asked me whether he should operate in a case of caries of the tibia in a poor woman at a station where the only physician was a homœopath:—"Do it if you dare! You shall never cross our threshold if you do. Let her die first."*

If it be unpardonable sin to give advice to one such, where is the sinning less for my honored friends Professor Cabell, and Professor Stephen Smith, and Professor Bowditch and Professor Hosmer A. Johnson, to sit in the National Board of Health in daily consultation with a homœopath as their medical peer, in consultation not over the life destiny of one individual, but over the life destinies of hundreds of thousands? Surely mere considerations of pecuniary recompense or public distinction did not tempt these men to voluntarily accept an association based on what the Code of Ethics has been interpreted to denounce as inconsistent with the honor and duty of a regular physician. When men of their unassailable integrity, against whom no other man in this Association can lift a finger, have done this thing, it ill becomes us lesser lights to thunder *anathema maranatha* against him who, once in his career perhaps, may have occasion to say to one of these irregulars, "Throw away your pellets—take a dose of castor oil." Or, if the litany of curses be hurled against all who violate even one aspect of one command of the ethical decalogue, be consistent and begin with these sinning elders in Israel. Excommunicate the members of the State Boards of Health and Medical Examiners, who sit cheek by jowl with both homœopaths and eclectics, even though they have done more, as in Illinois, to lift the wheel of progress in the true ethics of medicine out of the rut in the beaten road over which it has jolted, than any formal code however rigidly construed. Drive out from this Association whole societies, which, as none know better than your Permanent Secretary, have admitted graduates of eclectic and other spurious colleges as members and can send them here as delegates. Go further—add this new section to Article IV: No practitioner of medicine who counsels or allows his wife to employ any physician whose practice is based on an exclusive dogma for herself or his children, (and I know more than one such) shall be recognized as worthy of fellowship in this Association. And furthermore, look not only at the mote in the twelfth, thirteenth and fourteenth lines of Article IV, but make your combination general against all those who ignore or violate any line of any other section of the fifteen pages of the Code. Execrate the advertisers, the trumpeters of their own exploits, the slanderers and back-biters, the cutters-in and the cutters-out, and the man who prescribes "my diaphoretic mixture," or "my tonic cordial" to be had only at Mr. Jones' store and pockets a share of the sale. I fear you will have to decimate and re-decimate the 85,671

* Since this paper was read, my friend Dr. Bush, of Wilmington, President of the State Board of Health, of Delaware, and the member for Delaware of your section in State Medicine, narrated to me a case in point of a worthy old gentleman of his acquaintance, whom being seriously ill he went to visit and found under treatment by a homœopath for "disease of the kidney," but suffering intolerable agony from an enormously distended bladder. He did not hesitate to *seek* the homœopath and inform him, notwithstanding the latter's assurance that urine was dribbling away all the time; that the bladder must be evacuated or his patient would die, and he offered himself to catheterize him. Dr B. was chagrined when the homœopath asked leave to accompany him in his carriage, but he consented, discharged three pints of detained urine and then having saved his friend's life and relieved his sufferings, left the case, although the homœopath begged him to continue in charge.

practitioners of medicine in the United States until instead of 1 to every 585.44 inhabitants, there will remain but 1 to every 58,544, who can be adjudged by such a rule of ethics and found guiltless.

But a truce to these contentions. The Association must attend to weightier matters, and speak in no uncertain tone. Temporizing and procrastination have been practiced without success. If medical societies and medical schools and medical teachers will not act, this Association must do so for its own dignity and self-preservation. We have tilted against the wind-mill of homœopathy until every Don Quixote is assured he has attacked a castle. But for the prominence we have given it by the intolerance of our attitude, it would have shrunk into insignificance with Thomsonianism and the surgery of Regina dal Cin. The most blatant denouncers of association with homœopaths do not hesitate to proclaim themselves allopaths, "An allopath? Why an allopath is a regular physician," is the stereotyped reply to the questioner in fundamental methods of cure. "Certainly, sir, I am an allopath," is the unhesitating admission of men who have subscribed to a Code of Ethics, which denounces those whose practice is based on an exclusive dogma.

Such being the results, let it be your part to prescribe an efficient remedy. The expectant treatment will not answer. *Similia similibus non curantur.* The knife must be applied and the unsightly cacoplasm removed. To the schools we should be able first to look, and if *all* the schools would only matriculate those who can read and write the English language correctly and use the simple arithmetical processes involving a knowledge of weights and measures, the first important step would have been taken, but so long as M.D.'s are granted to men who are not A.B., or its equivalent, what can be expected? I was once asked by the Secretary of the Navy to obtain for him the requirements for matriculation at one of our great schools, and when I told him with much chagrin that I was sure there was none, he urged that I must be mistaken, since every literary college in the land insists upon some measure of preparation in those who enter its halls. What would he have thought of the requirements for matriculation at an institution whose graduates discoursed of the *blud*, and of *helth* and of *medasin*, who prescribed *granes of calomel*, *drams of lodnum* and *watter dressings*, and treated *spraned fingures*, *broken thyghs* and *fishers of the anise?* What of that school, one of whose quiz-masters, laughing with me at the failure of a candidate to define my question, "What constitutes potable water?" remarked, "Why, any fool should have known that. The very name denotes that it is water that can be carried, and I suppose you had special reference to taking it on board ship."

The standard of our profession is trailing in the dirt, and this not because the rank and file are unworthy, but because the standard bearers fail to hold it aloft, and the leaders are laggard. Of the seven hundred and seventy-one men we turned away, many, perhaps a majority might have been made competent physicians. One very sad case elicited the sympathy of the board. A candidate from the Eclectic Medical College of Philadelphia, who had shown considerable aptitude, lamented his own incompetence, and when asked how he came to study at such a place, said that he went there by the advice of his preceptor, a graduate of the University of Pennsylvania, and that he had spent in fees, tickets, etc., more than five hundred dollars, the savings of many years by his father, whose ambition had been to educate him thoroughly as a physician.

If preceptors fail to appiy the lash and spur, if mushroom schools can spring into existence wherever half a dozen men ambitious of the title of professor, get together, if colleges, in their rival contention for students accept any who apply and graduate all who pay their fees, this Association, at least, ought to bar the door against the pretenders who issue from them. Some years ago, in conversation with an intelligent mechanic, who was painting my house, and who had been a master workman until he lost health and everything he possessed by services as a subordinate officer in a volunteer regiment during the war, he told me that he had just met a former comrade in the army, a mechanic like himself, who was so well dressed that he congratulated him on the prosperity of which there were so many outward signs, and was amazed to learn that he was practicing medicine, having secured a petty position under the government, which only required his services during the day and left him free to attend the lectures at night, and in less than two years he emerged a doctor. I myself knew a messenger in one of the Bureaus of the Navy Department who accomplished this feat, and a young auctioneer's clerk, learning from me that twenty-one is the legal age for graduation, said: "Well, I am going to be a doctor, but I am not yet nineteen, and I will not begin before, since it only takes two years to get through."

But I am only repeating a trite, thrice-told tale. The necessity for reform in medical education is undeniable. Let us begin the work of reformation. If the American Medical Association is something more than a convivial assembly—if it is sitting here as a senate in serious deliberation as to the interests of the professson, it can no longer ignore this question. Years ago, your excellent committee, Drs. Davis, Toner and Weatherby, and the committee of the Medical Society of the State of New York, Drs. Squibb, Eliot and Bradford, provided for raising the standard of preliminary education required of medical students, by compelling preceptors to exclude from their offices all who fail to receive the certificate of a properly constituted Board of Censors, but the colleges must be coerced into doing their share. Harvard and the University of Pennsylvania will fight a hopeless battle if they are without allies.

It is for you to say to every one of these great schools and famous teachers, as well as to the petty schools and their tyros in teaching, you must, and at once, set the example of reform; require a preliminary scholastic training of your matriculants; appoint examining boards, who shall have no pecuniary interest in the size of your graduating classes; make your examinations in part written, to remain on record as evidence of the candidate's ability or lack of it; and

insist upon a practical familiarity by the novice with the tools of his art—its drugs, and apparatus, and instruments. For awhile, there will be a falling off in revenue, but the Code of Ethics denounces the prostitution of our calling for sordid purposes, and what more mercenary spectacle can there be than that witnessed at the close of a college session, when, with blessings and music and big bouquets, a new battalion of doctors marches forth, commissioned to assume the most solemn responsibilities humanity offers!

Should the colleges neglect to institute these reforms, then let the Association appeal to the State Medical Societies to urge the several State Legislatures to appoint State Boards of Medical Examiners, who alone shall conduct the final examinations and issue certificates of qualification. It will not be long before the public will recognize, appreciate and reward the work. Nowhere in the world are there more able teachers than in this country. Why should not their pupils be equally signal? While the former sow such good seed, why should it be cast on rocky, untilled soil? Let it be our part to see that only good grain, free from tares, shall be garnered into the storehouses as food for the suffering multitudes who cry to us for help.

In furtherance of these objects, I beg to offer the following resolutions, to be referred to the Association, should the Section in State Medicine give them its approval:

Resolved, That the Section in State Medicine urges upon the Association the necessity for at once taking steps to exclude unqualified members from the profession by refusing fellowship to illiterate, ignorant and incompetent graduates.

Resolved, That the Association be recommended to authorize the Section in State Medicine to act as a standing committee on Medical Education, the several elected members being required to communicate without delay, (1) with the several State Medical Societies and the Legislatures of the States they especially represent, with the object of creating *State Boards of Medical Examiners*, where such are not already in existence, whose certificate shall be necessary to the issue of a license to practice medicine in that State; and, (2) with the authorities of every regularly organized medical college in the State, which has not already taken such action, urging upon them, *First*, the *requirement of a proper preliminary education of matriculants*, to embrace at least a knowledge of English orthography, and grammar, the etymology of the more common Greek and Latin derivatives, and the fundamental rules of arithmetic, to be ascertained by a written examination, preserved for reference; and, *Second, greater care in ascertaining the fitness of candidates for a degree*, by making their final examination in part a written one, to be kept on record and accessible for inspection by State Boards of Medical Examiners, Boards of Censors of medical societies, and other authorized persons requiring information as to the professional qualifications of graduates.

Resolved, That it is the opinion of the American Medical Association, that medical colleges should confer upon graduates the degree of *Bachelor in Medicine*, such graduates to be eligible to the degree of *Doctor in Medicine* at the end of three years, after having given satisfactory evidence of their qualifications to the Board of Censors of the State Medical Society.

Resolved, That Article II. of the Plan of Organization of the American Medical Association be amended by this additional proviso: *Provided*, that every permanently organized State, County, or District Medical Society entitled to representation in this Association shall be required to appoint a *Board of Censors*, which shall rigidly scrutinize the literary and professional qualifications of every candidate for membership therein; and hereafter no delegate shall be admitted to a seat in this Association, who shall not have received the certificate of such a Board of Censors, or of a State or National Board of Medical Examiners.

A VERY LARGE SALIVARY CALCULUS REMOVED FROM A PATIENT.

BY JULIAN J. CHISOLM, M.D., BALTIMORE, MD.

Salivary calculi are not of very rare occurrence. A tumor under the tongue, on one side of the frenum, a dilated duct from the sub-maxillary gland full of fluid, and called ranula, might contain calcareous deposits. But very rarely have we the opportunity of reporting a calculus of such magnitude as the one which I extracted from the mouth of a patient two months since. I herewith append a report of the case:

Mr. W., aged 73, consulted me for a glaucomatous trouble. During the consultation, he desired to know whether his defect of vision could be aggravated by a disease of long standing in the mouth. In inspecting this cavity, I found a large swelling under the tongue, on the right side of the frenum. It was a very prominent elevation on the floor of the buccal cavity, extending from the inner face of the chin toward the root of the tongue. Its nature was apparent at the first glance, for at the anterior and upper part of this large, round, fleshy mass was an opening one-fourth of an inch in diameter, through which could be seen the exposed surface of a salivary calculus. A probe passed in through this opening entered into a large cyst, the thickened and distended duct of Wharton, which was filled with a solid calcareous mass. With a scissors I slit up the cyst wall, and removed from its bed a very large calculus of brownish-white color, which weighed, when thoroughly dried, 159 grains. It was pear-shaped, the stem or contracted part having been moulded in the less dilated posterior part of the salivary duct. The calculus was 1⅜ inches long, ¾ of an inch broad at its largest end, and ⅜ of an inch near its most contracted end.

A thread passed around the stone in its longest diameter measured 3⅜ inches. The circumference at the thickest part was 2¼ inches, and 1¼ inches

around its most contracted portion or stem. The surface of the stone was rough. It could be easily cut with a knife, the section showing a laminated structure. A drop of acid upon the surface caused carbonic acid to bubble up, showing that carbonate of lime entered into its composition. Chemical analysis showed that phosphate of lime was the chief constituent. The tumor had annoyed the patient for a long time. Its peculiar nature was not suspected till revealed by ulceration of the sac.

PERITYPHLITIS TERMINATING IN RESOLUTION.

J. B. STAIR, M.D.

John Frost; American farmer; aged 30 years; previously healthy, while eating supper on Monday evening, Nov. 26, 1883, felt a sensation of soreness in the right iliac region. It was not severe, and gave so little trouble that on the next morning he went to his usual work, and continued working until noon, when, the pain becoming much worse, he took to his bed. The pain from that time until Thursday morning, when I first saw him, was of an intermittent character, and very severe, and was general over the whole abdomen. On my first visit to the patient, the surface of the abdomen was excessively tender, the weight of the bedclothes even causing increased distress. Pulse was 108; temperature high. There had been some vomiting, and the bowels were constipated, though they had been moved freely by injection. I regarded the case as one of peritoneal inflammation, and sufficient morphia was given to procure rest, combined with small doses of calomel, and fomentations over the abdomen. I saw the patient again the next day, it being the 30th. General condition about the same; pain, however, had become located in the right iliac region; great tenderness there, and a not well-defined feeling of induration. Diagnosed forming abscess of, or in the region of, the vermiform appendix. Continued anodynes and the application of fomentations over the affected locality.

Dec. 1.—Tumor well-defined, hard and very tender. There has been no vomiting. Patient slept well under the use of morphia. Bowels moved by enema.

Dec. 2.—I saw the patient to-day with Dr. T. F. Stair, of Mazomanie. He confirmed the diagnosis already made. Pulse 90; temperature 101; takes nourishment well. The tumor is large, hard, and no evidence of fluctuation.

From this time on to the 6th, the pulse and temperature rose steadily until the latter reached 103½. There were no chills, but the patient sweat profusely whenever sleeping. No fluctuation could be discovered positively, but deep pitting could be produced by pressure around the circumference of the swelling. It was a question whether it was best to operate, or wait another day. It was finally deferred, and on my visit the next day I was somewhat surprised to find the temperature down to 98½; pulse 68, and the patient in every way comfortable. The tumor was no smaller, but much less tender. From that time the patient rapidly improved, and is now able to work. When seen last, a week ago, there was still a hard, indurated feeling over a space two inches in diameter at the site of the difficulty, but not tender, and occasioning no inconvenience.

Spring Green, Wis., Dec. 27, 1883.

NON-UNION OF FRACTURE OF THE SHAFT OF THE FEMUR TREATED BY EXERCISE.

BY G. W. NESBITT, M.D., SYCAMORE, ILL.

(Read before the Surgical Section of the American Medical Association June, 1882.)

Non-union of broken bones is so uncommon an event in surgery, that it has been estimated that it does not occur in a larger proportion that one in five hundred fractures. And as fractures of the shaft of the femur constitute but a small per cent. of all fractures, it must follow, that not one physician in ten, in general practice, will meet with one case in a lifetime, unless his treatment of fractures should be exceptionally bad.

But should the *one* case fall to either of you, you will, after having exhausted the resources of written surgical authorities, and taxed your own patience and ingenuity to the utmost, most gladly avail yourselves of any practical hints upon the subject, however humble the source, before subjecting your patient to the peril and uncertainty of a resection, or the dangers and professional disgrace of amputation.

And although the plan of treatment adopted by me in the case which I am about to report may not be wholly original, yet the fact that it has proved successful in this and several other cases that I have been able to collect; and that it is not described in any of our modern text-books of surgery, is the only apology I shall offer for presenting it in detail for your consideration.

September 30, 1877, Mr. E. E. Woodard, a strong, healthy man, age 29 years, fell from a tree, a distance of 61 feet, striking on the ground, producing a double Colles' fracture, and an oblique fracture of the left femur at the middle third. The patient was then living in an adjoining county, and was attended by a physician of that vicinity till Dec. 9, 1877, when he was brought to Sycamore and placed under my care.

At my first visit I found him looking well, after a wagon ride of sixteen miles. The thigh was incased in a loose pasteboard splint, over which was applied a starch bandage, and a long splint loosely tied to the outside of the limb as a temporary protection against accident while on his journey to Sycamore. I removed the dressings, and found the leg shortened to the extent of nearly four inches, with the inferior extremity of the superior fragment tilted forward and upward by the unrestrained action of the psoas muscle, while the inferior fragment was drawn downward and backward by the gastrocnemii muscles, thus separating the extremities of the two fragments

at least two inches. No attempt at union seemed to have been made. The pasteboard splint was so loosely applied that the hand could be easily passed between it and the thigh, thus allowing great freedom of motion of the fragments, while, as has been remarked, the muscular contractions tended to separate more and more their extremities.

The general health of the patient was apparently good, and the fact that the forearms had both united, added to the array of circumstantial evidence surrounding the case, led me to conclude that the causes of the non-union were local rather than general; viz., separation of the fragments and too much motion.

I decided to commence the work anew, so first endeavored to put the parts as nearly as possible into the condition of a recent fracture, by making extension till the ends of the fragments were very nearly in apposition; then by bending, twisting, and moving the fragments freely upon each other, to break up any adhesions of the soft parts, and finally by rubbing the opposing surfaces of the bones together until crepitus could be distinctly felt and heard. So well was I pleased with the result of my efforts to produce a recent fracture (?) that I put on firm, well-fitting splints around the thigh, and applied the long splint, with extension and counter-extension, with as much confidence in the final result as if the fracture had been an injury of to-day.

The degree of inflammation and excitement in the adjacent tissues was considerable, and gave the patient, as well as myself, confidence that it would result in union of the fragments. At the end of six weeks the union had become so firm (in the mind of the patient) that I removed the splints, to find that although the limb was in good shape, and nearly its full length, with the fragments in apposition, yet the false joint was as complete—non-union as perfect, as the day I first saw it. On moving the fragments upon each other now, I could only get a sliding sensation instead of crepitus; as if the bones had become entirely covered over with soft tissue.

On the 6th day of February, 1878, I cut down to the bone at the seat of the fracture, introduced a Brainard drill, and broke up all the intervening tissues, and perforated the ends of the fragments with four holes each, hoping thereby to produce sufficient inflammation to induce the formation of callus, and secure a bony union.

The patient was very much prostrated for several days subsequent to the operation, from the effects of the anæsthetic used; and before he had fully recovered his natural tone and appetite, a severe attack of nephritic colic supervened, which not only complicated an already troublesome and tedious case, but so undermined the general health of the patient, by bringing on complete loss of appetite, nausea and vomiting, with œdema of the feet and legs, etc., that I considered it necessary to get him out of bed, in hopes that fresh air and exercise might do for him what I had little hope of accomplishing with him in bed. Therefore, on the 18th day of February, twelve days after the operation, having applied a firm, well-padded, close-fitting sole-leather splint to the thigh, after the plan of Prof. H. H. Smith, *i. e.*, with a shoe and irons with joints at the knee and hip, upon the same principle as the ordinary club-foot shoe, or a brace for paralyzed limbs, I supplied him with crutches, and for the first time in nearly five months, he assumed his perpendicular and stood upright like a man. For the first few days, as might be expected, locomotion was slow, but the improvement in the general health was rapid. He passed a large number of renal calculi, soon after getting up, which gave relief to the pain, nausea, vomiting, etc. His appetite again returned, the œdema of the feet and legs disappeared, and, as he expressed it, he "felt first-rate."

The leather splint was fastened around the thigh with straps and buckles, and was loosened every day, and the limb exposed to the sunlight, and rubbed with the hand to induce a more healthy condition of the soft parts, and encourage the natural circulation. But very little inflammation followed the drilling, so, on the 6th day of March, there being no appearance of union taking place, the patient being put to bed, I again repeated the operation with the drill after the plan of Brainard, which being followed by only very slight inflammation, I again resorted to the drill on the 16th, and was again disappointed in not getting the inflammation and consolidation which the books lead us to expect.

Thinking, perhaps, the ends of the fragments might be diseased or wanting in vitality, I determined to try the drill once more, and, if possible, excite an inflammation in the healthy bone tissue. Therefore, on the 31st day of March, I entered a larger drill at a point nearly three inches above the inferior extremity of the superior fragment, and passing it obliquely downward and backward, drilled through both fragments, the point of the drill coming out on the posterior surface of the inferior fragment fully two inches from its superior extremity. Having made two other holes with the drill in a similar manner, and in a similar direction, I withdrew the drill and entered it again at the point of the overlapping superior fragment, passed it upward and backward between the fragments, moving the drill freely, breaking up all adhesions and tearing up the soft tissues between the fragments, and, *finally*, drilling obliquely into other fragments from the center, or the space between the overlapping bones. I removed the drill with much satisfaction, believing that if there was any benefit to be derived from drilling we must now get it. I was at least confident that inflammation would follow the operation, and in this I was not disappointed. The leg was again dressed as if it had been a recent fracture, this time using a weight and pulley to make extension, and, after a few days, putting on the long splint to prevent the toes turning out or in, and twisting the thigh at the point of fracture. Inflammation followed the operation to such a degree that I began to fear that my perseverance would be rewarded with suppuration. But this threatening appearance soon passed off, and at the end of three weeks I never saw a more promising case of recent fracture. Callus could be distinctly felt about the ends of the fragments, and a consolidation of the bones seemed inevitable, when another attack of

nephritic colic, with the passage of large quantities of calculi, came on, and in ten days the callus had disappeared, the inflammation had subsided, and the parts were in much the same condition they were two months before. I was discouraged somewhat, and undecided as to what step I should take next. I again put him on crutches with the limb supported by the leather splint, and while he walked about recuperating his strength, I pondered much on what the next procedure should be in his case.

About this time I attended the meeting of the American Medical Association at Buffalo, and while there I consulted several eminent surgeons in regard to the case, who agreed in the opinion that it would be necessary to make a resection in order to secure union, as they had fears that some portion of the muscular tissue was drawn in between the fragments, in which case it would be impossible for union to take place. Owing to the renal difficulty, they, however, advised a delay of the operation till the general health was restored.

On my return the patient was in the country, and I did not see him for two or three weeks. When he returned his health was much improved, and I commenced preparations for making a resection, but I so feared and dreaded the consequences of the necessary confinement that I at last decided to test the plan which I am about to describe, and which consists in applying a plaster splint and compelling the patient to walk without crutches, similar to the plan first recommended by White, of Manchester, and afterwards adopted by Hunter, Champion and several other surgeons, but which from some cause, or without cause, has so fallen into disuse that it is not even mentioned by a number of our standard authorities on surgery. And not one of those that do refer to it—so far as I have been able to learn—has given any description of the dressing and treatment, or any directions for applying it. This, as I have before remarked, together with the belief that the plan pursued by me was original in some respects, has induced me to present the particulars of the treatment.

But before proceeding with the dressing, I would remark that some soreness still continued in the bones from the last drilling, and the circulation in the limb was better than at any time previous to the operation of March 31, which encouraged me in a measure to wait and try this plan, which had been recently recommended to me by Dr. Horace Tupper, of Bay City, Mich., before resorting to resection.

July 25, having first applied a close-fitting elastic stocking to the limb, as far up as six inches above the knee, I then made extension, till the fragments were brought as nearly as possible into apposition, and applied broad strips of a firm woolen blanket lengthwise of the thigh, and extending below the knee, and above the trochanter major and the tuberosity of the ischium. These strips completely surrounded the thigh, and were held in place by a roller bandage of the same material, applied firmly from the condyles of the femur, to the perinæum and the tuberosity of the ischium. I next applied a roller of mosquito net, then a coat of plaster of Paris; and while it was yet soft, I applied strips of wire gauze, extending the whole length of the thigh, and outside of this another covering of the mosquito net, which was again coated with plaster, wire gauze, and more netting, till a splint was formed at least half an inch in thickness, and extending the entire length of the thigh. I now reflected the ends of she longitudinal strips of blanket stuff, which was first applied to the thigh, back over the outside of the splint, and secured it by a roller bandage of the mosquito net, extending from within half an inch of the lower border of the splint to within half an inch of its upper margin, and over this applied a thin coat of plaster, which in turn was covered by a muslin roller bandage, which gave it a finished appearance and completed the dressing.

The cushion-like margins of the splint above and below, formed by the reflection of the lining of the splint, as it were, were not only neat, but comfortable and firm, while the whole splint fitted so closely from the perinæum and tuberosity of the ischium above to the condyles of the femur below as to render shortening almost impossible after the plaster became hardened.

Extension was kept up till the splint became firmly set, when the patient was allowed to get up and go about, bearing his weight upon the broken leg without the aid of canes or crutches, except when taking a long walk—as coming down town—a distance of nearly a mile, when he used one crutch, and sometimes a cane and crutch. But he worked about home, sawing wood and doing chores about the house, without any artificial support most of the time.

The first few days he complained of some soreness at the point of fracture, but not sufficient to discourage him in his efforts at independent locomotion.

He was now really self-sustaining, and I left him to take care of himself till October 6, when I removed the plaster dressing, and found that a firm bony union had taken place, with the limb in good shape, and with less than three-fourths of an inch shortening. This man has since that time been employed as a house carpenter, also in putting up wind-mills. He walks without limping, does all kinds of heavy work, and climbs a ladder with as much agility as if nothing had ever happened him.

In addition to the general plan of treatment, I would call attention to the use of the wire gauze, for the purpose of strengthening and at the same time reducing the weight of the splint, as I do not remember to have seen any account of its employment for that purpose previous to its application by me in this case, while the same is also true of the use of the elastic stocking; and I am sure if any of my brethren should once test it in a similar case, where a bandage must be worn for several weeks, they will be convinced that there is more than the difference in the cost of the two, not only in the comfort to the patient, but in the annoyance to the surgeon.

The following letter, recently received from Dr. Horace Tupper, of Bay City, Mich., in which he reports four successful cases treated by this method, will be found of particular interest in this connection:

BAY CITY, MICH., May 8, 1882.

DR. G. W. NESBITT:

Dear Sir—Your letter of March 21 asking me for a report of the cases of non-union which I have treated with plaster of Paris bandages, and thereby obtained union, was received, and in reply would say, that the first case was that of Mr. B. T., aged 83 years, who broke his thigh by falling from his horse in 1868. I was called to operate on him in 1870. He then had non-union. On account of his age and enfeebled health I decided not to operate. But in order to get him out and strengthen his system, I applied adhesive straps to his foot and run a cord over a pulley, and put on about a ten pound weight with orders to let me know when it was getting so painful that he could not endure it any longer. I was sent for the next day. I then wrapped the thigh in a piece of old army blanket, in which I had a leather strap folded in the upper margin to serve as a perineal band to sustain counter-extension, the foot and leg having been bandaged the day before when I put the straps on the foot. Then, while making strong extension and counter-extension, I proceeded to apply the plaster of Paris bandage from the condyles of the knee up to the perineal band, and including the belt. I kept him recumbent until the next morning, when I got him upon his feet. He complained of pain at the point of fracture whenever he bore his weight on it for two weeks or more; but never complained of pain after the second bandage was put on. The first bandage was on about four weeks. The second one some two months, and the limb was perfectly solid when it was removed. I never had an opportunity of knowing whether the union that took place was ligamentous or bony.

Case No. 2 was a Mr. B., aged 43, a Canadian. He had his thigh broken in 1868. I saw him in 1870, with non-union. Put on heavy extension for about two days, then applied plaster of Paris bandage with complete success.

Case No. 3 was that of Mr. E., who broke his thigh in 1873, followed with non-union. He fell into my hands in 1875. I applied strong extension, then the plaster of Paris bandage as in the preceding cases, and obtained the result desired, viz., complete union.

Case No. 4 is one that came to my knowledge as having been treated by another physician after having seen the result of my treatment of case No. 3. The doctor put on the plaster bandage without making extension, so that although he got good strong union the limb was crooked, owing to the bandage being put on when the limb was out of position.

I mention this case because it shows that the application of the plaster bandage will unite the bones in some way, whether it be in apposition or not.

I have other cases, but deem the above sufficient for your purpose. Yours truly. H. TUPPER."

In addition to the above cases, I have learned of another case of ununited fracture of the femur, treated successfully by this method, by the late Dr. E. G. Castle, of Quincy, Illinois, but owing to the death of the doctor, I have been unable to get a report of the case, although it is vouched for by many responsible physicians of that city.

As is indicated in Dr. Tupper's first case, I would mention that generally, it will be best to remove the dressing at the end of three or four weeks, and apply it anew, as the muscles of the thigh are pretty sure to shrink under the pressure of the bandages, thus allowing too much motion at the point of fracture. But in my case, the leather splint had been worn so long that there was little danger of further shrinkage; hence there was no necessity for applying a second bandage.

The presence of *active inflammation* is always a contra-indication for this treatment, while the case of Mr. Woodard, and Dr. Tupper's first case, will indicate the class of cases to which I consider it most applicable, although I believe it should always be given a trial before resorting to the more severe and dangerous operations of resection or amputation.

As to the risks or dangers of this plan of treatment, I would state, that in one of White's cases, a large abscess formed on the thigh; this, however, did not prevent a favorable result, and is the only instance in which positive harm has resulted from the treatment. And in view of the great good that has resulted from this plan of treatment of non-union, or ununited fracture of the femur, and the very slight danger attending it, I ask only in justice that it be reinstated as a standard method of treatment by the surgical authorities of our profession.

EULOGY DELIVERED AT THE FUNERAL OF THE COUNT, KNIGHT-COMMANDER, PROFESSOR GIAMBATTISTA ERCOLANI.

BY PROFESSOR GIROLAMO COCCONI.

The profound sorrow felt by Bologna at the sad announcement of the irreparable loss of Giambattista Count Ercolani, calls us to-day, reverent and desolate, around this bier for the last farewell to the illustrious and excellent citizen.

But it is not the mourning of Bologna only; all Italy with emotion lifts the funeral shroud, and salutes the corpse of one of her most famous and favorite sons.

Wherever darted the swift, electric fluid, conveying the sad intelligence, a cry of grief burst from all who knew the man or his reputation.

Scientific academies, universities, bodies of learned men, politicians, civil and military authorities, civic, municipal and provincial associations vie with each other in rendering this tribute of respect, affection, and sorrow to the man who had such claims on the public regard.

The press of the city, every class of liberals in politics, are unanimously showing the general grief.

An eminent scientist, an upright citizen, a fearless patriot. Felsnia boasts of having given birth to this patrician who sought fame in the results of study rather than in the federal parchments of his ancestors.

Educated in the school of the great Antonio

Alessandrini, whose learned diligence he early imitated, in the most lamentable poverty of means, he contributed to the foundation of those monuments of surprising activity, the museums of comparative anatomy, and veterinary pathological anatomy.

But this youth of so brilliant promise Bologna lost in 1849, for he belonged to that pleiad of distinguished patriots who were guilty of having loved Italy, when, with the evil rulers who kept it enslaved and divided, the love of country was counted a crime.

The events of 1848, the historic incidents of August eighth, and the memorable defense of Rome in which he took part found him warm with this holy sentiment.

When the last bulwark of Italian liberty fell by the arms of the French Republic, and the Sacerdotal power was rëestablished, Ercolani, as a member of the Roman constituant assembly was driven into exile.

He repaired with other Bolognese to Tuscany where the regime of the Restoration seemed milder; but the persecution of the government that was constituted in the name of the Pontiff was not confined to the limits of the State; it could not tolerate in a neighboring territory, an asylum for the banished, and by constant pressure exercised upon the mind of the Grand Duke obtained from him the dismissal of all the patriots who had taken refuge in his dominions.

Ercolani, obliged to leave the Tuscan territory at 24 hours notice, went to Piedmont which alone held aloft and honored the Italian flag. There, with scanty means, he dwelt in a poverty sweetened by the sympathy of his wife and a beloved child, and by the friendship of the most eminent patriots throughout Italy.

But his mental endowments were quickly recognized, so that being by royal decree made a Piedmontese citizen, the government conferred on him the office of Assistant Professor in the Veterinary School of Turin, with trifling salary indeed, more not being allowed in the financial condition of Piedmont after the disaster of Novara.

Our Ercolani was, however, by no means discouraged. On the contrary, with the feverish activity which always distinguished him he was able, even from this humble position, quickly to emerge, and to make himself known to the scientific world.

Among the principal works of this period are especially his "Researches Historic and Analytical on the Writers of the Veterinary Art," a critical and biographical work entirely new, by the publication of which ancient manuscripts existing in various libraries were brought forward and interpreted.

With difficulty Professor Carlo Lessona, of Turin, founded in 1852 the first Italian journal of Veterinary Medicine for which, even then, the illustrious Professor Herring found words of praise and encouragement.

But the destinies of the country which, in 1849, appeared so adverse, brought forth, ten years later, that grand epic poem in action, from which Italy shone out one and independent.

In the first days of this unity, the minister Mamiani, rearranging the two veterinary schools of Turin and Milan, nominated Professor Ercolani to that of Turin. So that, from the lowest of the professorships, the lowest in seniority and compensation, he sprang to the highest position, which his deep learning had procured for him.

But a grievous family misfortune was quickly to bring days of renewed wretchedness, and to plunge again into sorrow the life of the poor Ercolani. His only daughter, the flower of his house, the comfort of her parents in long years of misfortune, who, although married, lived with her husband in her father's family, suddenly died when but little over twenty.

The parents, stunned and unable to endure such a loss, repaired to Bologna, bearing with them the anguish which can never find relief. Thus the school of Turin lost its illustrious Director, and science also seemed menaced with the loss of one its most ardent votaries, Ercolani, in the trouble of his mind, having firmly decided to withdraw from teaching. But the minister of that day, to whom it was highly important that Ercolani should not be lost as an instructor, releasing him from the duties of Director and Professor of the school of Turin, appointed him regular Professor of the Veterinary Institute in this illustrious University of Bologna.

Here he attained the higest offices, being several times President of the Medical Faculty, and twice Rector of the University.

His indefatigable industry and his love for zoötomical science did not permit him to drag out life in the mere germ of a veterinary school, carrying on alone the teaching of the various branches, and hardly aided by a single assistant. Hence he conceived the idea, and gradually attained it, of endowing Bologna with a complete superior school of veterinary medicine.

Aided by the liberality of the Province, and by government grants, he was enabled to enlarge the ill-adapted buildings, to erect new ones, and to procure the better accommodations that were demanded in order that the school might be adequately equipped for its purposes.

The shortness of the time that separates us from his death, the grief which oppresses our minds, deprive us of the ability even to enumerate his works, most of which are inserted in the memoirs of the Academy of Bologna.

It suffices to say that, endowed with an exquisite acuteness of intellect and with an iron will, he spent almost his whole life in subtle investigations, aimed at raising the edges of that veil under which nature conceals herself in her choicest workings. That he was a decided microscopist, when the microscope was in the hands of few, and an impassioned follower of both medicine and surgery, as well as of natural history, is shown by his numerous discoveries in the field of normal and pathological histology, of comparative teratology, of elmintology, of pathological anatomy, of embryology.

In a very learned work of historical and bibliographical curiosities, he restores to Carlo Buini, a Bolognese senator, the glory of the discovery of the circulation of the blood, this, too, carried off by for-

eigners, who assign it to Harvey, a physician in the time of Charles First of England.

Noteworthy among his many works are his patient "Researches on the Genetic History of Trematodic Worms, and the Adaptation of Their Species to the Surrounding Fluid," in which is shown his great skill as an observer and naturalist.

"The Formative Process of the Osseous Callus in the Different Fractures of the Bones of Men and Animals;" "The Interior Structure of Tendinous Tissue, and that of the Fibrous Tissue;" "The Transformation of the Histological Elements in the Animal Organism," and other works of minute anatomy, attest his skill as a histologist.

But the work that gained most attention from the learned of both continents was a series of papers regarding "The Intimate Structure of the Placenta in Woman Compared with that of Other Animals;" observations which led him to admit the unity of anatomical type and of nutritive function of the fœtus in all the vertebrates.

These works, of which we are at a loss to say whether they most exhibit his acuteness of observation, his intellectual strength, the exactness of his deductions or the vast extent of his knowledge, were reviewed in many foreign languages, and honored with a literal translation into English by Dr. Henry O. Marcy, of Boston, in order that the book might be in the hands of the physicians of England and the United States.

In opposition to the universal applause with which the scientific press received the discoveries of Ercolani upon the structure of the placenta, one of the most famous anatomists and histologists of Germany, Kölliker, maintained the old doctrines, and did not accept the new observations and inferences of Ercolani. The latter could not leave unanswered the objections of such a man as Kölliker, and published three long letters, rich with new facts and observations drawn from the fields of comparative and pathological anatomy, which, with much courtesy of manner, he addressed to his distinguished opponent.

And in this last work, which fell from his pen when the cruel disease which was to slay him had already developed its deadly germ, in this his profound learning especially shone, like a torch which flashes brightest before it is extinguished.

But among the most important scientific treasures which he left as results of his intellectual labors should be reckoned a valuable collection of works on the veterinary science, rich in manuscripts and rare editions, patiently collected by him in the course of many years, and sometimes at heavy cost, a collection which would have been unfortunately scattered if he had not, with munificent forethought, secured it for one of the libraries of this learned city.

His wide reputation had made him a member of the principal national academies, such as the Royal Academy of Turin, the Lombard Institute of Science and Letters, the Academy of Science, Literature and Art of Padua and of Palermo, the Medical and Surgical Academy of Genoa, the Physical, Medical and Statistical Academy of Milan, the Academy of the "Quirite" and that of Agriculture of Florence, the Scientific and Literary Academy of the "Concordi" and that of Physical and Mathematical Science at Naples, the Medical and Surgical Society of Bologna, of which he was also President; the Royal Society and National Academy of Veterinary Medicine of Turin, of which he was honorary President; and many others which escape recollection.

But strangers also wished to adorn his name. Three foreign veterinary schools, that of Stuttgart, of Dorpat, and of Kasan, named him honorary Professor. He was a member of the French Academy of Medicine, and of the Central Society of Veterinary Medicine of Paris, of the Royal Academy of Belgium, the Imperial Academy of Berlin, the Veterinary Society of St. Petersburg, the Royal College of Veterinary Surgeons of London, the Numismatic and Antiquarian Society of Philadelphia, the Veterinary Union of Wurtenberg, and he had a friendly correspondence with the most eminent European scientists, among whom may be cited the great names of Virchow, Owen, Turner, and Milne Edwards. Such, in short, was the patriot, the man of science. What was the citizen?

The object of public esteem, he was a member of the municipality of Bologna, and provincial Councillor, President of the Agrarian Society and of the local committee, member of the Provincial Sanitary Council, offices which he filled with love and honor.

Though a student, and apart from the strife of politics, he three times accepted a deputation to Parliament, not to satisfy a devouring ambition, but from loyalty to the party to which from conviction he belonged. He sat always "on the Right" from deference to his honorable political friends, and because his tendencies drew him to that party which had united the great Italian family. He took no active part in parliamentary labors, the scientific life, to which he was now devoted, not tolerating occupations foreign to study, and recoiling from the barren party strifes that are carried on in the parliamentary arena.

Deeply convinced of the goodness of our institutions, sincerely liberal, abhorring doubtful measures, jealous of meddling with internal arrangements, he appeared to oppose the important reforms, which were introduced by the ministers "of the Left." But this was not in him a blamable venting of systematic opposition, rather was it a natural result of excusable preferences and firm convictions.

The Italian government held him in high esteem, and availed itself of his wise assistance in many important contingencies.

The high renown which he had acquired in the sciences, and his services procured him many honors. He was "Knight of Civil Merit of Savoy, Knight Commander of the Order of Maurice, and of that of the Crown of Italy. He was a member of the Royal Commission for the publication of the classics in the Province of Emilia, and the colleges of all the universities of the Kingdom, without distinction between medical and veterinary, twice appointed him to the Superior Council of Public Instruction.

Of such honorable tributes Ercolani was truly worthy, because he did not seek them, nature having

constituted him modest and disinterested. Affable in manner with all, and especially so with the young, not rigidly bound to routine, but scrupulous in the duties of instruction, he was beloved by the youth whom he had as pupils for a period of more than thirty years. Cordial with friends and inferiors, he strove as much as possible for the advantage of all without injustice to any.

Men so excellent, intellects so supreme, must not disappear, though they quit this mortal life.

But those inmost secrets of the organism which Ercolani so many times sought to unveil by his minute researches seemed at last to rebel against him, fierce to destroy such robustness of intellect and potency of investigation.

Heart cannot endure to recall the sufferings that preceded his end—sufferings borne by him with touching resignation. There cannot be imagined a more cruel torture, against which strove in vain all the resources of that ungrateful science which he had so much loved.

With him gradually passes away a generation of deserving professors who, having for their mission the progress of science, as well as its teaching, leave the indelible impress of their steps upon the earth as they move across it.

Adieu, Giambattista Ercolani; science salutes thee for thy learned industry with which thou hast made the Italian name honored far and wide.

Adieu, Giambattista Ercolani; Italy in thee salutes one of those excellent patriots who, with self-denial, exile and martyrdom, prepared the triumph of her Holy cause.

Adieu, Giambattista Ercolani, oh, worthy citizen; thy Bologna, from whose walls thou has departed forever, salutes thee, her ornament and pride.

Adieu, Giambattista Ercolani, illustrious professor, attended by the sorrow of the colleges of this ancient seat of learning—Bologna—famous for so many ages for the renowned men who resembled thee.

Accept these, our unadorned but sincere words, as a poor tribute of the love we bear thee.

In this woful affliction, fain would we find for thy desolate companion, who in thee loses the last of those dear to her, some accent which might soothe her grief, but the word dies upon our lips, for we also have need of comfort.

Bologna, Nov. 19, 1883.

MEDICAL PROGRESS.

MATERIA MEDICA AND THERAPEUTICS.

Caffeine Considered Physiologically and as a Therapeutic Agent.—Dr. Leblond concludes, in *La Tribune Medicale* for November 18, a series of articles on this subject. His general conclusions are:

Of the physiological dose:

1st. Caffeine is an excitant of the nervous and muscular system.

2d. It diminishes the frequency of the pulse, increasing the force of the heart-beat and blood pressure by the vaso motor constrictors.

3rd. It lowers the peripheral temperature.

4th. It has no influence on the formation or excretion of urea.

Of the poisonous dose:

1st. Caffeine exaggerates the excito-motor force of the spinal cord, paralyzes the peripheral sensitive nerves, and diminishes the sensibility of the pneumogastric.

2nd. It causes a rapid lowering of the blood pressure through paralysis of the vaso-motors.

3rd. The heart, in cold-blooded animals, beats slower and slower, to be finally stopped in systolé; in warm-blooded animals, it becomes quicker at the close and stops in diastole.

4th. It produces tetanic contraction of the muscles.

5th. It rapidly lowers the temperature.

6th. It increases malassimilation.

As a therapeutic agent:

1st. It is, as a rule, tolerated much better by the system than is digitalis, and by beginning with small doses, there is no fear of the bad effects often produced by the latter.

2nd. It steadies the heart, increasing its force and slowing its beats.

3rd. It produces more or less of a diuresis.

4th. Not only is it a substitute for digitalis, but it should *always* be administered in serious cases which may result in immediate death, because its action is surer and more prompt than that of digitalis.

5th. It is best to administer the caffeine in small broken doses, in potions or subcutaneous injections, and to never begin with a stronger dose than 20 centigrammes, to determine the susceptibility of the patient, then to increase the dose rapidly, if necessary, to from 50 to 75 centigrammes. It is useless to give more than 1. gramme 50.

6th. In affections of the heart it should always be administered when, from any cause, the patient's condition requires that the use of digitalis should be stopped or when it is not well tolerated.

7th. Caffeine seems to lower the temperature in pyrexia, being useful also in these cases as a heart tonic.

8th. It is frequently very beneficial in albuminuria of cardiac or other origin.

9th. And finally, in cases of strangulated hernia it seems to act upon the muscular contraction of the intestine.

PHYSIOLOGY.

The Influence of Alcohol on the Physiological Action of Chloroform.—Dr. R. Dubois (*Comptes Rendus de la Societé de Biologie*) has been conducting a series of laboratory experiments upon this subject, by bringing dogs under the influence of alcohol and then administering chloroform as an anæsthetic. He has arrived at the following conclusions:

1. In the condition of acute alcoholism, anæsthesia is produced more rapidly.

2. The vital resistance of the animal is shorter.

3. The proportion of chloroform in an anæsthetic mixture can therefore be diminished.

4. The quantity, in volume, of the mixture required to penetrate the bronchi to produce anæsthesia and death is less than the amount necessary in the normal state.

5. As in the non-alcoholized animal, the lowering of the temperature is in direct relation with the duration of resistance on the part of the subject.

A REMARKABLE CASE OF TRANCE—A WOMAN "ASLEEP" FOR FIVE MONTHS.—A very peculiar case has occurred at the Western Infirmary, Glasgow—as reported in *The Medical Press*. It appears that a respectable married woman named Mrs. McInnes, the wife of a post-runner, after giving birth to a child became unconscious, and for seven weeks lay in bed in a comatose state. It was then resolved to convey her to the hospital, which she entered on August 1. From the day of her entrance she remained in the same unconscious state until Nov. 20. She lay on her back and never moved a muscle. Her pulse has averaged 80; her breathing was fair; and to keep up her strength she was fed three times every day by means of the stomach-pump apparatus. No hopes were entertained that she would recover, but on the 20th she opened her eyes, sat up in bed, and emitted an exclamation of astonishment on finding where she was. Mrs. McInnes is, of course, very weak, though conscious, and hopes are entertained of her ultimate recovery. Prof. Gairdner and Dr. Cameron have had charge of this singular case, and Dr. Gairdner promises to give a full account of the case in the medical journals.

UTERINE MILK.—A recent number of the *Zeitschrift für Geburtshülfe und Gynäkologie* contains an article by Dr. G. Von Hoffmann, of Wiesbaden, in support of the doctrine advocated by Ercolani, and to a certain extent by Dr. Braxton Hicks, viz., that the fœtal villi in the placenta do not float naked in the maternal blood, but are surrounded by cells whose function it is to secrete a special fluid serving for the nutrition of the fœtus and called uterine milk. Dr. Von Hoffmann believes that he has been able to extract this fluid from the human placenta. His method is simply this: He takes a quite fresh placenta, which has not been allowed to come into contact with water, and lays it with its maternal side uppermost. A cotyledon, the integrity of which has not been damaged, is then selected, and carefully dried with a sponge or towel, so that no blood adheres to it, and into it a capillary tube is then pressed, so that it may penetrate about one-third or half an inch. The tube thus used pushes the villi aside, and lies in the inter-villal spaces. It is important in inserting the instrument to see that no blood-vessels are injured by it, lest blood be effused between the villi. When a capillary tube is employed in this manner it sucks up the fluid from the inter-villal space (*i. e.*, the uterine milk) which can then be collected and examined. Dr. Von Hoffmann has examined the fluid from about forty placentae, some at term, others from cases of abortion at different months. Microscopically, he finds in it the following constituents:

1. Red blood corpuscles of different sizes and depth of color, often, especially in placentæ of the earlier months, with little or no tendency to aggregate into rouleaux.

2. White corpuscles.

3. The chief structures contained are what the author calls "uterine milk globules," peculiar, clear, round globules, having a very thin, feebly refracting wall, on the average about as large as white corpuscles, but varying from a tenth of to twice their size. These bodies precisely resemble those seen in "uterine milk" obtained from the placenta of the cow.

4. Clear, watery intercellular fluid. The above-described "uterine milk globules" are present in such numbers that Dr. Von Hoffmann calculates that each cubic millimeter of the fluid contains 180,000 to 200,000 of them.

5. There are also found free decidual cells and pigmentary molecules, granules and flakes of different shapes and sizes, which our author regards as products of the disintegration of red blood corpuscles.

Fluid such as this, Dr. Von Hoffmann states, can be extracted from every healthy placenta; if it is wanting, the placenta is not healthy. He believes, moreover, that he has traced the mode of formation of these "uterine milk globules" from decidual cells, and the production of the large decidual cells from the many nucleated "giant cells" of the decidua.

Dr. Von Hoffmann's views as to the physiology of fœtal nutrition are summed up in the following propositions:

First.—The general office of the decidua, both in animals and in man, is to supply the fœtus during its intra-uterine life with a part of the nutritive material necessary for its growth. To fulfill this function the decidua serotina becomes a special milk-secreting organ, which after the birth of the child is expelled, with and as an integral part of the placenta.

Second.—The secretion of this organ, the so-called uterine milk, is separated into gradually formed spaces, in which lie the placental tufts. Here the uterine milk is mixed with maternal blood, which is at the same time extravasated, and together with it forms the material for nutrition of the fœtus, this material being only suited for absorption by the placental villi when these changes have taken place.

Third.—From the point of view of the comparative anatomist, it can no longer be maintained that there is any essential difference in this respect between the placenta of man and the higher animals.

Dr. Von Hoffman promises a further communication in which he will elucidate the mode in which this uterine milk is absorbed by the placental tufts.—*Medical Times and Gazette.*

OBSTETRICS AND GYNÆCOLOGY.

THE COUVEUSE FOR CHILDREN.—On page 339 of this journal there appears a reference to the use of what is called the "couvreuse," a typographical error having reference to this apparatus, which has been detailed in full by M. A. Auvard in the *Archives de Toeologie*, and the description of its practical application is of sufficient interest to give it a place here. The great use to which the couveuse has so far been put, is to support life in cases of children prematurely,

born, and with congenital weakness. The records of the Maternité give the following striking instances. The numbers refer to the hospital register:

No. 7, age 6 months, 6 days, weight 1,720 grammes, remained 46 days in the couveuse with benefit; No. 8, age 6½ months, weight 1,820 grammes, remained 5 days; No. 14, weight 1,630 grammes, remained 11 days; No. 21, weight 1,530 grammes, remained 9 days; No. 71, age 7 months, weight 1,530 grammes, remained 12 days; No. 73, age 7 months, weight 1,400 grammes, remained 12 days; No. 109, weight 1,550 grammes, remained 10 days.

In cases of cyanosis and œdema, there were five so treated in whom the circulation was rapidly re-established. Generally a five days' sojourn was sufficient, in one case 11 days was found to be necessary. Benefit was also observed in cases of slight pulmonary congestion, and in apparent death where, after resuscitation, the children were placed in the couveuse. Dr. Auvard claims by statistics that the death-rate of children in the Maternité was reduced from 66 per cent. to 38 per cent. in consequence of its use.

Prof. Winckel published in 1882, in the *Centralblatt f. Gynäkolgie*, a description of an apparatus for placing children prematurely born, or suffering from affections of the respiratory organs, in a bath where they could remain indefinitely, and somewhat upon the plan of the couveuse. The bath tub was of metal, with a projection upon the bottom, so placed as to furnish a support for the back of the child. It had a moveable cover, pierced at the four corners by small openings, and having a little window in the center, covered by a moveable piece of glass. The head of the child was placed in a depression made for the purpose at one end of the tub, and was kept in place by the cover, which was protected by a piece of leather that fitted under the chin, and so prevented the head from slipping down. The capacity of the tub was about five gallons, and the water was discharged by two stop cocks, which also let out the fæcal matters. The water could be kept at a temperature of 96.8 to 98.6, by putting in a quart of boiling water every hour or half hour, the bath being wholly renewed every six or eight hours. Winckel has only recorded six observations. These were in cases of premature births affected with asphyxia, and were all favorable. The prolonged bath, according to this method, is undoubtedly a more energetic means than the couveuse of counteracting the low temperature in new-born children, but it must always be difficult to administer and require constant attention. It has not been used for longer than twenty-four hours at a time. A part of the chest must frequently be above the surface of the water, and thus exposed to a lower temperature, and the head being external, the child must inhale cold air.

M. Auvard, acting under the advice of M. Tarnier, has constructed a couveuse for private use, which he considers as an improvement on the bulky and expensive form used in the hospital. It is made of a box 25½ inches long, 14 inches broad, and 19½ inches high, the sides being about an inch thick. The interior of the box is divided into two parts by an incomplete horizontal partition, about six inches from the floor. At the lower part are two openings, one at the side extending the length of the box, with a sliding door for receiving the hot water vessels, the other and smaller is at the other end of the box, for the admission of a regulated quantity of air. The top has a glass cover, fastened by buttons which hold it close, and to one side is an opening to allow of the passage of air. In the opening of communication between the two compartments is placed a moist sponge and also a thermometer. The box can be lined at will with wadding and white felt. The heating is done by the introduction of vessels holding about a pint of boiling water, of which the box is capable of receiving five, four being generally all that is necessary to keep up a temperature of 87.8° to 89.6°. The box is heated by three of these vessels for a half hour, then, having reached the proper temperature, the child is put in, and in about two hours a fourth vessel is inserted, and from that time on about every hour and a half or two hours these vessels are changed, and to give sufficient heat they must contain *boiling* water.

SURGERY.

Belladonna Injection as a Cure for Gonorrhœa.—Dr. John Roche recommends this in the *Medical Press*, detailing a case of bad gonorrhœa with intolerable chordee at night; in which he ordered an injection of seven ounces of water, an ounce of mucilage of acacia, twenty grains of extract of belladonna, and twenty grains of sulphate of zinc, a tea spoonful to be injected immediately before and after micturating, and a similar amount the last thing at night, great care to be used in passing the injection fully down as far as the pain was most intense. An ointment of spermaceti and mercurial ointment, ʒiv. each, and ten grains each of extract of belladonna and powdered opium, as a paste to be smeared along the perinæum and around the crura penis at night. There was no chordee that night, and within a week there was a complete cure. This case occured thirteen years ago, since which time in numerous cases of gonorrhœa this injection has been used with unfailing success. Patients have always stated that it is the injection and not the ointment which stopped the chordee carminatively, and it has been used in the acute and in the chronic and gleety stages; in first attacks and in those making one of a series, and in cases complicated with inflamed testicle and chordee, and nothing seemed to contra-indicate its use nor mitigate its success.

Application for Warts.—Dr. Cordes, of Geneva, states (*Journal de Thérapeutique*) that he has always found the following application successful: Iodine six, crystallized carbolic acid twenty-one, and alcohol two parts and a half by weight. After scraping the wart or cutting it down to a level with the skin (without causing it to bleed), he touches the wart with a few drops of the above solution. In a minute it becomes soft, and allows of another scraping and a new application; and sometimes even a third scraping and application can be made without causing bleeding.—*Medical Times and Gazette.*

THE

Journal of American Medical Association.

PUBLISHED WEEKLY.

THE EDITOR of this JOURNAL would be glad to receive any items of general interest in regard to local events, or matters that it is desirable to call to the attention of the profession. Letters written for publication or containing items of information, should be accompanied by the writer's full name and address, although not necessarily to be published. All communications in regard to editorial work should be addressed to the Editor.

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SATURDAY, JANUARY 12, 1884.

HOW TO BECOME A MEMBER OF THE AMERICAN MEDICAL ASSOCIATION.—We have been asked so many times during the past year how a physician can become a member of the American Medical Association, and we have so many subscribers who are not members, that we deem it proper to give the desired information through the columns of the JOURNAL. The Association, by its plan of organization, is a representative body, intended to "collectively represent and have cognizance of the common interests of the medical profession in every part of the United States." The membership consists of delegates appointed by "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 Departments of the Army, Navy, and Marine Hospital Service of the United States; and of Permanent Members, consisting "of all those who have served in the capacity of delegates, and of such other members as may receive the appointment, by unanimous vote" of the Association in annual session. During the last ten years, so few have been proposed and elected by unanimous vote, that this mode of gaining membership is too uncertain to be available, except in extraordinary instances. Consequently, the only reliable mode of becoming a member of the National Association is, first, to obtain membership in some regular State, county, or district medical society, and then obtain from such society an appointment as one of the delegates to represent it in the American Medical Association. Having obtained the appointment as delegate, it is necessary to actually *serve* by attending the annual meeting of the Association for which the appointment is made. Having thus attended and been registered as a delegate, in doing which he is supposed to have personally signed the constitution and by-laws, he becomes a permanent member so long as he pays the annual membership fee, and continues to obey the rules and regulations of the Association.

The object of thus limiting the mode of gaining membership is twofold, namely, to make the annual meetings of the Association substantially *representative* of the regular professsion of the whole country, and to encourage the formation and maintenance of State, county and local societies in all the States and Territories of the United States. Each State, county and district medical society, entitled to representation, has the privilege of sending to the Association *one* delegate for every *ten* of its regular resident members, and one for an additional fraction of more than half of that number. The medical staffs of the Army and Navy are each entitled to four delegates, and the Marine Hospital Service of the United States to one delegate. The liberal number of delegates allotted to medical societies renders it easy for any member of such societies, who desires to attend an annual meeting of the Association, to obtain an appointment as delegate, for the reason that there are not as many members ready and willing to attend any given annual meeting, as the societies are authorized to send, except in such as may be in the immediate vicinity of the place where the Association holds its meeting. Those who, by having once served as delegates, have become *permanent* members, can attend any annual meeting of the Association they may choose, without further appointment as delegates.

VISITOR.—Dr. J. B. Hamilton, Surgeon-General of the United States Marine Hospital Service, has been spending a few days in this city recently, during which he was pleasantly entertained at a dinner in the Tremont House, given by Surgeon Miller and a number of friends.

THE "SANITARIAN" FOR JANUARY.—The first number of the twelfth volume re-appears in the form of a *monthly*, but enlarged to 96 octavo pages of reading matter. It is filled with matter of interest and importance to physicians, municipal officers, boards of public works, school officers and teachers, heads of families, and all who are interested in promoting personal or public health. Price, $4.00 per year.

For convenience of reference and to facilitate correspondence, we have placed the names and address of the Officers of the Association and of the several Sections on the last page of the *Journal.*

SOCIETY PROCEEDINGS.

A PLEA FOR GREATER SIMPLICITY IN PRACTICAL MEDICINE.

BY JAS. F. HIBBED, M.D., RICHMOND, IND.

The following is the concluding part of a lengthy and most interesting paper on the subject named, which is published in the *Louisville Medical News*, advance sheets of which were kindly furnished us.—Editor.

There is a lesson in the history of the fashions that have had sway in the treatment of typhoid fever for the last fifty years, and I will briefly recite their salient angles for our improvement. The score of authors whose views I epitomize have been leading men in their day (except perhaps, the last, whose book is the child of the present year, and is an index of current opinions), and each is to be regarded, as he is, in fact, an exponent of the views of a large class of predecessors, contemporaries, and followers, and makes his declarations after the most ample opportunities for observation and the fullest experience.

Bartlett's classical work on the Fevers of the United States was first published in 1847, and a second edition, edited by Alonzo Clark, M.D., was issued in 1856. Before Bartlett wrote, the distinction between typhus and typhoid fever had already been fully accepted, and in introducing the treatment of a number of representative men, he does it in this language: "Various, and to some extent opposite, modes of management have been adopted by different practitioners; they have been conducted on a large scale, for the most part in a fair and impartial spirit, and under circumstances favorable to the discovery of the truth; but they have not yet resulted in the establishment of any uniform and satisfactory method of treatment. There is no unanimity in the opinions and conduct of different practitioners."

Dr. Jackson, of Boston, urges free evacuations, with tartarized antimony and calomel, then venesection, and this to be followed with more antimony every two hours, in increasing doses for two weeks.

Dr. Nathan Smith condemns the antimony, calomel, and bleeding treatment, and all perturbating remedies, trusting to nature, diluent drinks, and farinaceous food.

Chomel's treatment is tentative or symptomatic, relying on nature and refreshing drinks. For some years he regarded sodium chloride as a specific, but ultimately made a manly retraction, acknowledging his error.

Louis relied, for the most part, on venesection, less or more, according to the vigor of the patient, continued for two weeks, and then trusting to drinks.

Bouilland bled *coup sur coup*, and applied leeches and cups between the venesections. He claimed extraordinary success.

De Larrouque came upon the stage in the fading days of the doctrine of Broussais, which had forbidden the use of emetics and cathartics for all purposes in the Paris hospitals for fifteen or twenty years. He revised the evacuant method, administered antimonial wine as an emetic, and seidlitz water, castor oil, and calomel as purgatives.

Huss, of Stockholm, opposed bleeding and evacuants, gave phosphoric acid as a febrifuge, and camphor, musk, etc., as stimulants.

Bartlett further recites the alum treatment by Barthez and others, Dr. Gerhard's blue pill and castor oil, Dr. Dundas' large and frequently repeated doses of quinia, which Dr. Peacock, found ample experience in St. Thomas' Hospital, did no good, and often harm, and then announces, as his own conclusion, that the management of typhoid "must be eclectic and rational, not exclusive and specific," quoting approvingly the words of Burserius, to wit: "For the less the operations of nature are disturbed by art, the milder and safer the remedies we employ are, the more successfully do we restore the patient's health." Dr. Bartlett was a wise physician, and Dr. Alonzo Clark was another.

About the time of the second edition of Bartlett, Dr. Geo. B. Wood's practice came on the carpet, and was popular. He recommended bleeding, calomel to salivation, and, above all, turpentine. Turpentine had been applied externally by others, but Dr. Wood discovered it as an internal remedy, and pushed it *ad nauseam.*

Dr. Bennett, of Edinburgh, gave two hundred and five grains of quinia in two days, and thought it produced alarming prostration.

Dr. Flint makes no distinction in the treatment of typhus and typhoid fevers, regards large doses of quinia injurious, except for reducing temperature, but thinks wet sheets should have a fair trial, and may prove useful

Niemeyer has found that cold baths and wet sheets reduce the temperature, but at the same time increase the production of heat and cause dangerous prostration. He, however, approves of Ziemssen's method of baths, or wet sheets applied ten degrees cooler than the patient, and while applied reducing the temperature, say twenty-six degrees. He also objects, on his experience, to large doses of quinia, but approves of doses of one or two grains.

Roberts favors mineral acids and small doses of quinia, and objects to the routine hydropathic treatment, alleging that "there are grave objections to its adoption.".

Bartholow prefers ten grains of calomel in one dose every day, or every alternate day, according to the temperature, for the first week, and three to five minims of Lugol's iodine three times a day for two weeks, or up to convalescence. This he speaks of as the German specific method, and, relying on Liebermeister's statistics, deems it good. Under certain symptoms cold baths may be applied, but there are several contra-indications. Twenty grains of quinia every four hours is recommended, and the cautious use of digitalis favored.

Carpenter has a long catalogue of remedies, one or more for each threatening symptom. He thinks cold permissible, but it must be applied with care and dis-

crimination; he objects to the calomel treatment, and mentions iodine as a drug to which some practitioners have resorted.

These twenty-two authorities have been quoted in an approach to chronological order, but there is no pretence that this statement covers the whole therapeutic scheme of any one of the authors mentioned. The service aimed at is to present the leading features of each as an exemplor of and a commentary on the variety of methods which have been and now are in vogue in the treatment of typhoid fever, each, as a rule, claimed by its introducer or chief disciple to be superior to all others, and appealing to statistics to prove the superiority. And in the face of this exhibit is it not obvious to every discriminating mind that the heroic treatment of typhoid fever of to-day has no more justification than similar perturbating management had in the time of Bartlett; and shall we not now, in the interest of science and humanity, join him in the sentiment so tersely stated by Burserius, viz.: "For the less the operations of nature are disturbed by art, the milder and safer the remedies we employ are, the more successfully do we restore the patient's health."

And do not the facts of this review constitute a superlative plea for greater simplicity in practical medicine? And with the lesson of this history pervading my mind, was it any marvel that I was surprised when the several members of the Tri-State Society so promptly indorsed from their personal experience the enthusiastic extravagance of the eloquent essayist? Not that Tri-State members were presumed not to follow fashions in therapeutics; members of all societies and no society must do that, but because the treatment of typhoid fever since its recognition has progressed in alternating cycles of heroic and mild management, it was my understanding that with the best practitioners a mild cycle was now dominant, and I had supposed the auditors of that meeting to be fully in accord with the better state of affairs. This was, however, apparently a delusion.

As a recapitulation of the chief points set forth in this essay, I present the following aphorisms as my professional creed. I believe:

That every physician should have an abiding faith in the power,and the value,and the necessity of medicine.

That all medicine that has force enough to do good if rightly given, may do evil if wrongly given.

That medicine should not be prescribed unless a clear necessity is recognized for its employment.

That this necessity may arise from the patient's physical condition, from the patient's mental condition, or from the mental condition of others.

That in all cases the least disturbing remedies that will meet the indications should be prescribed.

That in all illnesses nature is the grand factor in restoring health; the role of art is that of auxiliary and assistant.

That much thought and talk about disorders may be a cause of ill-health in the parties so thinking and talking, and is at least a mark of ill-breeding, and a lack of good manners.

That details of personal distempers should only be made to the physician for his guidance, or to attendants, as an aid to nursing.

That routine in practice is never scientific, and is liable to be mischievous.

That fashions in therapeutics should be followed only when the new mode has the sanction of one's scientific knowledge, or is sustained by unimpeachable testimony.

That the guiding motto of every medical practitioner should be, "All diseases should be trusted to nature when art can not declare an assured benefit by intervening."

That evolution in the direction pleaded for in this paper must come through the experience of the graybeards in the profession; the young physician must practice what he has been taught, and he neither sees in a text-book or hears from a professor's chair a remembered plea for simplicity in medical practice.

Richmond, Ind.

DOMESTIC CORRESPONDENCE.

PHILADELPHIA LETTER.

JANUARY 2, 1884.

Since I wrote to you last a vexed question interfering much between the cordial feeling of physicians and pharmacists seems to be rapidly approaching its solution. I refer by this to the patent medicine nuisance. Pharmacists have long been made the dupes and catspaws of the vile impostors who palm off on the public worthless compounds, and by judicious advertisements they manage to spread the idea that their articles are possessed of great medicinal value, which they endeavor to prove by testimonials of persons who have made their diagnosis to suit their own fancy, or by using the well bought opinions of some Reverend clergyman, and even some physicians who have sold their standing with their colleagues for the sake of paltry gain or cheap notoriety.

The pharmacists have been cleverly deluded into acting as retail agents for such enterprising adventurous speculators in public health, they have allowed their goods to be displayed in their shops, large posters and gilded show-cards to adorn their premises, while they supplied their patrons with a class of literature that was calculated to deceive the ignorant masses in regard to the quality of the ware they praised. The pharmacists are by rights an auxiliary branch of medicine, and if they were to conduct their business in conformity with their medical ethics, they ought to belong to us as much as other specialists. Remonstrance on the part of the medical profession, however, proved of little avail with them, and they insisted that they had to make a living, and would do it as best they could, without regard to physicians who only gave them indifferent support anyhow.

Under such circumstances their establishments degenerated rapidly to fancy-goods stores, patent-medicine depots, cigar stores, and in many instances clandestine rum shops; no wonder that physicians' support became less and their patronage was more

centralized to better conducted places. As all social evils and abuses correct themselves in the long run, so has this, as I have said above, also brought about its partial downfall.

The snake that the pharmacist held nurtured in his bosom has awakened and stung its lifegiving benefactor.

The patent-medicine trade, not content with selling goods through the retail drug-trade alone, has endeavored to enlarge its sphere and to also introduce their goods in other quarters. To do this prices had to be cut and slaughtered, until to-day there are lots of stores retailing patent medicines all over the country for less than the average druggist, who was instrumental in making a market for them, can buy them.

An organization of druggists in our city at first attempted to maintain regular prices in spite of the opposition, but this plan was soon abandoned as impracticable, and resolutions instead adopted to the effect that cutting of prices of patent medicines should not longer be discouraged, nor the word cutter, as relates to the prices of these goods, should be any longer considered as an offensive opprobrium. This means that patent medicines should hereafter be retailed without profit, a most wholesome measure for stopping their sale by druggists entirely, unless they can afford to trade at a loss or do business without profit.

There will be some, no doubt, who will still hang on to the issue of traders at tradesmen profits, but the majority of pharmacists, who have both the ambition and the ability to raise themselves from a subordinate position, will discard such a trade as no longer profitable, and will coöperate with the medical profession in preparing and supplying for public consumption such medical articles and compounds as their joint skill will devise. The medical profession will recognize this by patronizing those who alone deserve the names of pharmacists, while the traders and dealers in patent medicines should no longer be intrusted with compounding or dispensing of medicines or preparing medical compounds. A happy illustration of possible coöperation and friendly spirit amongst physicians and pharmacists was given a few days ago by Dr. Lawrence Wolff, one of our foremost pharmacists and chemists here, who occupies the position of President of the Druggists Association, to the members of which he gave a reception at his fine residence, and to which he had invited quite a large number of prominent physicians. It was about the first time they had met as a class, and I am convinced that either class was glad to know the other and agreeably disappointed in the intellect they represented. The most prominent person there besides our city officials and leading citizens was the venerable Emeritus Professor S. D. Gross, America's greatest surgeon, who is still active and gives his hearty support to all measures tending to elevate our profession. Prof. S. W. Gross; Dr. J. V. Shoemaker; Dr. J. G. Lee; Dr. Woodbury; Dr. J. M. Barton; Dr. L. Turnbull; Dr. T. Hay, and many others of Philadelphia's leading physicians were also amongst the guests.

It occurred to your correspondent that such meetings were more practical in bringing about good results and improving the relation of medicine and pharmacy than all the papers, resolutions, etc., that can be adopted, raising pharmacists to our own standard and making them by ethics bound to oppose nostrums, quackery and quacks, and protecting the rights of suffering humanity.

I have no doubt the day will come when we will accept otherwise qualified pharmacists in our medical associations, have special sections for their branch, and have them participate in our debates. At any rate the prospects are favorable towards that end, and if we could not persuade druggists to abandon their nefarious traffic in nostrums, the failure of profit from such a source will prove a more weighty argument, to the persuasion of which they will not fail to yield. They certainly ought to, for, as I am informed, the money value of two-thirds of all medicines sold in this country is derived from patent medicines, the largest part of the profit of which goes towards the unscrupulous manufacturer and proprietor. If druggists will give up this pernicious trade, the profit thereof will surely find its way into their pockets from physicians' prescriptions and the sale of legitimate medicinal compounds.

PALESTINE, Dec. 5, 1883.

PROF. N. S. DAVIS, M.D., CHICAGO, ILL.:

I beg that you will excuse this trespass upon your time and patience, but knowing that anything connected with our profession and out of the beaten track possesses interest for you, I presume to make the following statement:

There have occurred in this city several deaths, some in one day, some in two and some in three days' duration of illness, and it is claimed by some physicians here that the cause of death, or the disease, was "malarial coma."

I have practiced medicine now some thirty-two years, and have read some and had some experience, and until now I have never heard of such a disease as "malarial coma." I can imagine a case where the malarial poison or influence may become so overwhelming and so obtunding to the sensorium or intellectual faculties as to at once produce a comatose condition, but for it to induce such a condition of things as occurred in my case confounds me, and obliges me to beg for light on this (to me) most inexplicable condition of things.

Monday evening, November 5, I was summoned to see Mr. T. R., aged 36 or 37 years, a saloon-keeper I found him suffering from a fever, it having been preceded by a slight chill. His temperature was about 106°; respiration hurried, about 32; tongue furred; pulse very rapid and bounding; bowels constipated; kidneys acting well. His previous history was that during the day he had eaten his dinner as usual and had gone to his saloon; in a couple of hours returned, feeling ill; got in his bed and sent for me. I found him as described.

I at once ordered cold applications to his head, and that his lower extremities be wrapped in a blanket wrung out of very hot water into which two handfuls of mustard and one handful of salt were mixed.

This was at once done, and the effect was to pro-

duce, in less than an hour, the most profuse sweating —so much that his clothing had to be changed and the mattress turned over.

I prescribed for him hydy. submur. and sodæ bicarb. aa grs. v, to be mixed, placed in a capsule and to be given him that night, to be followed in the morning by solution of crab orchard salts.

November 6. He had slept all night, perspiring well; the medicine had operated but once; he had not eaten anything, nor did he want anything; had no pain, complained of nothing, but thought the medicine had not acted enough; turned over in bed and went to sleep. I called at noon. Condition the same, and had slept all the time except when aroused. Temperature, morning, $98^{5}/_{10}$; pulse 74; respiration 44. Noon, pulse 76; respiration same; skin moist and pleasantly warm. In the evening, temperature $99^{3}/_{10}$; pulse 76; respiration 25; skin moist, and had slept all day except when spoken to; his answers to questions were prompt and rational. That night I prescribed two capsules containing hydrg. submur. grs. vii, podophylin, grs, ss, ext. hyosc., ext. taraxicum aa grs. iv, ext. jallapæ pulv. grs. vii.

Nov. 7. The medicine provoked five or six copious bilious evacuations. He had slept the whole of the previous night and during the morning until I visited him. He was perfectly conscious and conversed as usual, and upon some subjects not connected with himself or his illness. His temperature was the same as the day before, and so was his pulse and respiration. His skin was moist and pleasant; wanted nothing to eat; had no pain or unpleasant sensations. At noon I again called, and found him asleep. Skin moist and tongue clean. That afternoon he drank a good deal of lemonade, whisky toddy, milk punch and water, and drank in large quantities, so much so that it produced nausea and vomiting of what he had drank. There was no perceptible change in his pulse or respiration. His temperature $99^{3}/_{10}$; skin moist, and he slept between drinks, and as soon as he ceased talking. That night he would drink claret and ice.

Nov. 8. This morning his pulse is 76; respiration 28; temperature $99^{4}/_{10}$, and his stomach is nauseated; the claret had soured upon his stomach, and during my visit he vomited about a cupful of bile, and said, "If I could only get clear of that I would be all right." Thinking he had enough of cathartic medicine, I concluded I would order an emetic to cleanse the stomach of anything that might be offending there. I prescribed ant. et. pot. tart., grs 3, ipecac pulv., grs. 24, to be mixed and divided into charts two each, one to be mixed into two tablespoonfuls of cold water, and to be taken 15 minutes after the other.

He only took one of the powders, and instead of its emetic effect we got its cathartic. It provoked some seven or eight operntions, some large and some small, very yellow and bilious. They came without apparently any warning or control.

That evening his temperature was 96; pulse 74 and weak; respiration 29. His hands and arms, feet and legs up to his knees, were bathed in a cold, clammy sweat. I directed the extremities to be dried and rubbed, and a milk punch to be given him, and they soon regained their natural warmth and moisture.

Nov. 9. The night before he slept all night, and in the morning his bowels had moved twice, and so had the kidneys. The operations from the bowels were natural; fæcal, consistent, and of good color. He will not eat anything; temperature 99; pulse 75, full and strong; respiration 22; skin moist; tongue clean; eyes bright and clear; answers questions as previously, rationally and to the point; has no pain any where, and complains of nothing, and he seems more cheerful to-day; but as soon as he stops talking turns over and is asleep; will take no quinine, and in consequence of his great inclination to sleep I will not press it.

Nov. 10. At my morning's visit he was awake, and at once upon seeing me turned upon his side and seemed to be sound asleep; would not answer any questions, and would not be aroused. That same morning he conversed cheerfully and animatedly with some of his friends, and said he was getting on all right. In the evening he said to one of his friends, "I do not know what ails me, and while I have no pain any where, still I feel pretty bad." This night when I left him, at 10 o'clock, his temperature was 99, his pulse 72, and his respiration 28; skin moist and warm; neither his bowels nor his kidneys had acted during the day. I introduced the catheter and drew off a pint of healthy-looking urine.

At 10:30 I was hastily summoned to return to Mr. R.'s, and found he had a well-marked convulsion and that he was insensible. I injected brandy and ammonia hypodermically; he came out of it, and his temp. ran up to $101\ ^{3}/_{10}$, pulse 120 and weak; resp. 33. Drs. Hunter and Wood were with me. Dr. H. suggested the injection of quinine and brandy. Forty-five grs. of quinine and about 2 drachms of brandy were injected between 11 o'clock P. M. and 5 A. M. of the 11th. He winced when the hypodermic was given him, until 4:30; after that, no sensibility. The pupils of the eyes were enormously distended, and not sensible to the light. At 5:30 he had another terrible convulsion, and at 5:45 he died.

Now, of what did he die? He had had syphilis some time before. He drank very heavily, but never getting drunk, and he ate but little and very irregularly. He had not suffered with headache that I could learn. Was active and apparently in good health up to the day of his seizure.

We have now, and have been having, somewhat of an epidemic of jaundice; but he has not had it. I send you the thermometrical and barometrical ranges of the month here in this city.

We have had, and are still having, a great deal of typho-malarial fever. Now, dear doctor, please, if you can, diagnose this case, and give me your opinion of it and the treatment.

R.'s tongue was always moist, clean, nor showed any departure from normality, and his eyes were clear, with good expression, his position in bed was easy and natural, and his sleep apparently as pleasant and healthful as that of the tired laborer.

Now, doctor, coma is said to be a profound state of sleep from which it is very difficult to arouse the pa-

tient, and is the sequence of exhausting disease, and the consequence of some overpowering influence upon the brain, either from without or within, and, as I have thought, the expression of some disease the extent of which could be clearly defined.

But, my dear friend, I have failed utterly to find any cause for anything of the kind. Here is a man apparently in full vigor, in the prime of life, attacked apparently with a simple fever, and it yielding in a surprisingly short time to domestic remedies only, and not again reappearing; no evidence externally or by sensations experienced and described by the patient himself, when apparently he chose to give any expression of them, and then his real or apparent inability in the shortest possible time to give any expression of his feelings or anything about him, and then again, when those he desires to communicate with appear, he is able to laugh and talk with them as he would be in health. Is this an expression of disease, and if so, what disease? Sleep so deep, peaceful and continuous, and yet at times so easily ended, and at other times so profound. What does it mean?

He was not well, but where was the evidence of illness, except it be this strange and unnatural behavior, and what caused that?

Again, what caused the convulsion? and why should a simple fever usher in such a condition of things?

In 1853, I was practicing in New York city, and one day was suddenly called to see a woman having a convulsion. Upon arriving at her house, found her just recovering, and she seemed much astonished to find so many of her friends and neighbors assembled. Upon my telling her what had occurred, she was much surprised, and expressed herself as quite recovered, thanked me, and I left. In about an hour I was again summoned, and she continued to have recurrences of them the whole night, notwithstanding I leeched, cupped and bled, blistered and used revulsives, and did everything I could. The next morning I called upon my old preceptor, Dr. Mott, and he met me in consultation. As soon as he saw her, he said to me, "My son, she will die." Turning to the husband, said Dr. Mott, "Your wife is addicted to drinking to excess, is she not?" "Yes," said the man, "she never gets drunk, but drinks heavily, and then has intervals when she suffers terribly from remorse. Then she has much pain in her head." "Yes," said Dr. Mott, "she has softening, and effusion has taken place. She will die, and very shortly." And she did die in less than an hour, and before we left the room.

Now, could this have been a parallel case? Was the fever as manifested on the Monday, Nov. 5, the first giving way or effusion? And was the tendency to sleep or somnolent manifestations afterward present, the effect of that effusion? And were the intervals of lucidity and complete consciousness the result of a supreme effort of nature to rally, owing to the youth and great natural vigor of the man; and was the subsequent convulsion but the final giving way, and last falling back of the last great and successful charge of the grim monster over life?

And even so, it does seem to me, there should have been some external evidence denoting the terrible battle raging within.

Doctor, is there any evidence in the whole history of the case justifying it to be diagnosed "malarial coma?" Is there any such disease as malarial coma? Give me, I beg of you, your opinion, and of its treatment. I am, my dear doctor,

Very truly yours,

G. S. WEST, M.D.

AKESIS UNIVERSALIS.*

Thousands of dollars are being annually expended in the erection of stately medical colleges for the express purpose of producing more and better educated medical men and women. In fact, a higher preliminary and final education is demanded by the masses of the profession; and this is what the colleges are endeavoring to supply, for the express purpose of making our lives longer, happier, and less subject to disease.

Do they accomplish this? When we look at the certificates signed by "M.D's" we think not. As evidence of this, and the worthlessness of a higher education, let us examine two pamphlets: First, "A supplement to the *Journal of Materia Medica*," wherein thirty-six people with "M.D." appended to their names laud the "Elixir Iodo," for the following diseases: "Scrofula, scrofulous enlargement of the cervical glands, scrofulous affections of the bones, scrofulous eczema, cancerous affections, lupus, necrosis, osteo-periostitis, exostosis, caries, synovitis, (there spelled synoyities), hip joint diseases, anchylosis, psoriasis, prurigo, tuberculous affections of the bones, skin diseases *of all kinds*, cerebro-spinal meningitis, syphilis, gonorrhœa, enlargement of the liver, spleen, and kidneys, bronchocele, goitre, (two distinct diseases, sic.!) exophthalmic goitre, epilepsy, otorrhœa, deafness, diphtheria, erysipelas tonsillitis, gangrene of the lungs, dry gangrene and pleuro-pneumonia."

Whew! Here is a chance for a specialist. All he needs is a fountain which will furnish a constant supply of the Elixir, confine himself to the above diseases, which the Code will permit him to put on his card, and if the Elixir will do what the 36 M.D's say it will do, then for sure he has the remedy which has in vain been sought after since Æsculapius, Abernethy, Hunter, Drake, Mott. Sims, and that whole host of medical worthies, reaching from the present back into the past so far, that even time—that newly redivided substance—counts not the when.

Second. We have just received Part III. of Fellow's book (For the Medical Profession) on his Syrup of Hypophosphites. Therein the medical profession are thanked for their "generous patronage of his Syrup" which we suppose they do, for there are indexed recommendations in this number of 231 physicians and 26 medical journals, lauding the Syrup for: "Amblyopia, anæmia, angina pectoris, aphonia, asthma, apoplexy, imperfect assimilation, blepharospasm, bronchial affections—both chronic and capillary, broken heart (sic.), children's diseases, chorea,

*The universal cure of disease.

chronic chills, chronic congestion of the larynx, consumption, cough, convalescence, debility, diptheria, dyspnoea, dyspepsia, distrophia, glandular disorders, hæmorrhage, indigestion, insomnia, melancholia, menorrhagia, nervous affections, nervous system, neuralgia, night sweats, ocular paralysis, panphobia, ozena, paralysis, incipient phthisis, pneumonia, rapid growth, rickets, scrofulous diseases, skin diseases, strumous diseases and strumous keratitis, whooping cough, epilepsy, diarrhœa, incontinence of urine, paralysis agitans (Parkinson's disease, I suppose is intended, as there is in this disease no paralysis) leucorrhœa, marasmus, sleeplessness, loss of memory, loss of voice, timidity, despondency, hysteria, hypochrondria, wheezing, difficult or painful parturition, and change of life.

The medical press is loaded with tirades against admitting the non-educated into the profession, and yet the recommendations of this "Syrup" are signed by the best-educated physicians who have ever been produced in the whole civilized world.

This wholesale cure-all reminds me of a little story illustrative of some people's estimate of the action of remedies.

While a student of medicine under the late Dr. F. R. Payne, of Illinois, his friend, Dr. Johnson, came into my preceptor's office, and each related the greatest medical events of their long, large and successful practice. Dr. Johnson was a graduate of the old Jefferson Medical College of Philadelphia; was surgeon in the war of 1812; had treated nearly every medical and surgical trouble to which human flesh is heir, and in a large practice of over half a century, the events wherein his fees and *eclat* exceeded all the other achievements of his active medical life, were, rubbing a little sweet oil upon a child, which, while returning to his office, he saw playing in some smartweed near one of those large suburban residences near Philadelphia, to which he was subsequently called. The other, and possibly the greater, measured by the scale of dollars and honors, was wherein he was called a long distance to consult with a number of talented physicians in regard to a lady's health. As he and the other physicians were going from the bedside to a room where they might not be overheard in their sapient deductions, they passed through the dining-room, and as he passed, he picked up a piece of biscuit, which during the consultation he rolled into pills. At the end of a long and very learned history, diagnosis, prognosis and treatment of the case, he said, reaching out his hand containing the bread pills, "Gentlemen, I would give her one of these pills every third hour," which they did, without questioning as to their contents. It is needless to say the lady recovered (and a few years subsequently, was delivered of triplets.) This treatment is in keeping with the diversity and multiplicity of diseases for which these two—possibly most excellent syrup and elixir—are given, but the absurdity of any two remedies filling the requirements set forth by their respective proprietors—although thoroughly sustained by many physicians—is, to say the least, immense.

Our patrons, finding our prescriptions headed by never so reliable a drug firm's name, soon come to the conclusion that other people furnish us not only medicines, but also the brains to use them, and they say, why not get Mrs. Winslow's Soothing-Syrup; Dr. Hayhirst's Wild-Cat Liniment—as well do so as that their doctor should prescribe Fellow's, Tilden's, or anybody else's remedies.

There is a too successful effort being made by the leading drug houses to control, forestall, abridge, and render subservient to drug circles the whole medical profession. This is being effected by producing ready prepared compounds, not strictly patent medicines, yet answering the same purpose, for the dose and the diseases for which physicians must prescribe them is fully delineated on wrapper and pamphlet. As a sample of this, I have cited from two sample drug firms, who have lately supremely honored your scribe by sending him full instructions what to prescribe, without the trouble of consulting Stillé, Wood, Bartholow, Headland, and a host of other writers whom we once thought knew the action of medicines. The effect, both moral and medical, produced by this purchase of surnamed remedies, is injurious to the pocket and status of the practitioner, particularly if he be a neophite, for be it known the druggist who sells these proprietary preparations is much more liable to depreciate the merits of the prescriber, than if the dispenser's own pharmaceutical drugs were ordered. Besides this, no known remedy or combination of remedies will cure the list of diseases for which these drug firms have physicians' certificates as to the efficacy of their compounds. The trouble lies within the profession. They are owned by the druggists, and do not dare refuse certificates for fear of loss of influence.

In conclusion, I will ask the profession what is the necessity for students attending medical colleges, purchasing microscopes, and studying Koch's bacilli tuberculi, baccillivariolii, *et hoc genus omni*—when all they have to do in any disease is to get an almanac or one of these gratuitous pamphlets, printed solely for their professional benefit, wherein they will find more remedial expedients than were known to Hippocrates, Æsculapius, Sydenham, and their followers all.

GEORGE R. CENTER, M.D., M.A.
Evansville, Ind.

THE MICHIGAN MEDICAL REGISTRATION LAW.

This law is now in full force. Since the days of Solon down to the present time, it would be difficult to discover another piece of legislation equal to it in stupidity and uselessness. It would not be unreasonable to suppose, that the framer of this law had just emerged from the midnight of the Dark Ages in the form of a medical Rip Van Winkle, and through the thin mist of his recently acquired vision, saw the apparent dangerous condition of his professional brethren, as well as his constituents; then, after due deliberation, resolved to redeem the State from quackery, and thereby become a public benefactor in his day. But the reverse is the case.

The miserable charlatan, ignorant of anatomy and physiology; ignorant of every scientific fact in relation to the human system; destitute of every professional qualification, is a legal practitioner of medicine.

Men who cannot read three lines correctly in any scientific work; who have never dissected; who have never made a post-mortem examination of a body, with the exception of the pig; and then only to slice up the animal and devour him like a cormorant, are paraded before the public as legal physicians. These parasites of a noble art find their names published side by side with men of acknowledged skill and ability; men who have spent half a century in the profession, and who now for the first time witness their names in the same category with the most unscrupulous mountebank, "the steam doctor," and a list of ignoramuses whom this State has legalized as practitioners of medicine and surgery.

A law regulating the practice of medicine so broad that men without the slightest claim to medical knowledge; men whose only claim to medical education is that they have "practiced common sense for thirty years," or that they have put up a few cough mixtures, or a clap mixture for some gullible young man, but without sufficient ability to compound prescriptions properly, are now registered as physicians in the State of Michigan.

Such a specimen of medical legislation would doubtless do honor to the King of Dahomey; but to the State of Michigan it must ever remain an insult on her intelligence until repealed. The people are not benefited by it; scientific medicine certainly is not. The legislative body that passed this law, and the Governor who did not veto the bill, must ever look upon it as one of the most pusillanimous products of their puerile legislation.

J. F. Jenkins, M.D.

Tecumseh, Mich.

MISCELLANEOUS.

A Female Government Vaccinator.—Mrs. Annie Jessie Chambers has been appointed public vaccinator for the district of Morgan, South Australia.

Official List of Changes in the Stations and Duties of Officers Serving in the Medical Department United States Army, from December 28, 1883, to January 4, 1884.

Appel, Daniel M., Captain and Assistant Surgeon, having relinquished the unexpired portion of leave of absence granted by S. O. 68, Headquarters Division of the Atlantic, November 16, 1883, and reported for assignment, assigned to duty at Fort Porter, N. Y. (Par. 2, S. O. 247, Department of the East, December 29, 1883).

List of Changes in the Medical Corps of the Navy During Week ending January 5, 1884.

Medical Inspector, A. Hudson, from duty as Assistant to the Bureau of Medicine and Surgery, on the 18th inst., to the U. S. S. Lancaster, as the relief of Medical Inspector N. L. Bates, who is to be detached and ordered home.

P. A. Surgeon A. C. H. Russell, from the Navy Yard, Washington, to hold himself in readiness for sea service.

NEW BOOKS.

Altvater, Paul. Die Morphium-Einspritzungen. 8vo., 62 pp., 3. Aufl. Neuwied, Heuser.

Ammon, F. A. V. Die ersten Mutterpflichten und die ersten Kindespflege. 26. Aufl., 8vo., XVI, 315 pp. Leipzig.

Anweisung zur Ausführung der Desinfection für geprüfte Heildiener und für sonst amtlich in der Desinfection beauftragte Personen. 8vo., 16 pp. Berlin, Hayn's Erben.

Aufrecht, Oberarzt Dr. Pathologische Mitteilungen. 2. Heft, 8vo, III, 92 pp. Magdeburg, Faber.

Bergmann, Ernst V Die Schicksale der Transfusion im letzten Decennium. 8vo., 31 pp. Berlin, Hirschwald.

Bolz, Hans. Beiträge zur Casuistik der Nephrectomie. Inaugural Dissertation. 8vo., 93 pp. Dorpat, Schnakenburg.

Brücke, Ernst. Vorlesungen über Physiologie. 3 Aufl. Mit 103 Holyschnitte, 8vo., IV, 355 pp. Wien, Braumüller.

Ebstein, Dr. Wilh. Die Fettleibigkeit (Corpulenz) und ihre Behandlung nach physiologischen Grundsätzen. 6. Aufl., 8vo., VI, 56 pp. Wiesbaden, Bergmann.

Ziegler, Dr. Ernst. Lehrbuch der allgemeinen und speciellen pathologischen Anatomie und Pathogenese. 2. Theil, 3. Abth., 8vo. Jena, Fischer.

Znelzer, Dr. W. Untersuchungen über die Semiologie des Harns. 8vo, VII, 166 pp. Berlin, Hempel.

Brown, J. G. Medical Diagnosis: A Manual of Clinical Methods. 2nd edit., 8vo. Edinburgh, Bell & Bro. 370 pp., 10s. 6d.

Clarke, W. B., and Lockwood, C. B. The Dissectors' Manual. 49 engravings, 12 mo., 390 pp. London, Cassell. 6s.

Drummond, D. Diseases of the Brain and Spinal Cord, a Guide to their Pathology. 8vo. London, Kimpton. 10s. 6d

Gant, F. J. Diseases of the Bladder, Prostate Gland, and Urethra. 5th ed., illus. London, Baillière. 12s. 6d.

History of the Society for the Abolition of Vivisection. London, Pickering. 1s.

Mann, E. C. A Manual of Psychological Medicine and Allied Nervous Diseases, etc. 8vo., 714 pp. London, Churchill. 24s.

Porritt, N. The Operative Treatment of Intra-Thoracic Effusion. 8vo., 288 pp. London, Churchill. 6s.

Students Guide to the Examinations of Apothecaries Hall. 12 mo. London, Kimpton. 1s.

Thudichum, J L. W. On Polypus in the Nose, and other Affections of the Nasal Cavity. 3d edit., 8vo. London, Baillière. 1s.

Auerbach, Dr. H. Loranicum, ein neues Mittel gegen einige gefährliche Krankheiten des Verdauungsweges. 8vo., 11 pp. Berlin.

Capellmann, Dr. C. Facultative Sterilität ohne Verletzung der Sittengesetze. 8vo., 21 pp. Aachen.

Leisnick. H., Mielck, W. H. und Korach, S. Der Torfmoos-Verband. Mit 3 Abbildungen, 8vo., 42 pp. Hamburg.

Lexikon, biographisches, der hervorragenden Aerzte aller Zeiten und Völker. In ca. 4 Bänden. 1. Lieferung, 8vo. Wien.

Lorenz, Dr. Adf. Die Lehre vom erworbenen Plattfusse. Mit 8 Lith. Taf, 8vo, IV, 197 pp. Stuttgart.

Purjesz, Dr. Ign. Therapeutisches Recept-Taschenbuch für venerische Krankheiten. 8vo, VIII, 96 pp. Stuttgart.

Real-Encyclopädie der gesammten Heilkunde. Medicinisch-Chirurgisches Handwörterbuch für praktische Aerzte. Schluss-Heft. Wien.

Medical Ethics and Medical Etiquette, by Drs. Post, Ely, Vanderpœl, Pitcher, Hun, Wey, Agnew, Jacobi and others. New York, G. P. Putnams' Sons. 12 mo., cl., $1.25.

Mulheron, J. J. The Collective Investigation of Diphtheria. Detroit, Mich. 8vo., 120 pp, cl., $1.00.

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ORIGINAL ARTICLES.

THE COMPARATIVE VALUE OF THE NEWER TESTS FOR ALBUMIN IN URINE.

BY CHARLES W. PURDY, M.D.

Although the mere presence of albumin in urine can no longer be regarded as anything further than presumptive evidence of damaged kidneys; yet, it has so long formed the basis upon which the diagnosis of renal pathology has been constructed, and, moreover, as an element considered with other symptoms it still holds, and is likely to hold, an important place at least in preliminary investigations of renal disease. Therefore, all matters concerning the most reliable and ready methods of detecting the presence of albumin in urine must remain of practical interest and importance to the general practitioner. Much attention has been given of late to several newly proposed agents for detecting albumin in urine, both in this country and in Europe. Some of these, it has been claimed, are so exceedingly delicate in reaction as to detect the presence of albumin when the older methods, as by heat and nitric acid, failed to do so completely. Furthermore, most of these agents have been indorsed by some of the best authors on renal diseases, both here and abroad.

The general practitioner may, in consequence, encounter some confusion in deciding whether it be wise to accept the newer and readier methods or adhere to the older and long tried agents already in use. It is proper that we should carefully inquire into the relative value and reliability of the newer, as compared with the older tests, with the view of assigning to each their proper spheres in the routine of daily work.

First, then, we shall note the *acidulated brine test*, brought forward by Dr. Roberts in *The Lancet*, Oct. 14, 1882. It is prepared by mixing together a fluid ounce of diluted hydrochloric acid with a pint of water, saturating with chloride of sodium and filtering. It is claimed to be more delicate than Heller's test. It does not discolor the fingers or destroy the clothing in case it be spilled, and after a specimen of urine has been tested by brine for albumin, the *same* specimen may be tested for sugar by Fehling's test.

Picric acid was first brought forward by M. Gallipe in French current literature in 1872. Dr. G. Johnson more fully discussed its merits in *The Lancet* in Nov., 1882; as does also Dr. Pavy. Several articles appeared in that journal on the subject about the close of 1882 and the early part of 1883. The test solution is made by saturating boiling water with picric acid, and it may be applied by the contact method, viz.: by allowing the picric acid solution to flow down a glass rod, or pipette, over the surface of the urine, which latter must be previously treated with saturated solution of citric acid. If albumin be present, a white cloud is perceptible at the junction of the two fluids.

Tauret's test, or the potassio mercuric iodide solution, may be prepared as follows: potas. iodide 3.22 grammes, and hydrargyri bichloridi 1.35 gramme, are added to 100 cc. of distilled water and filtered. This salt was first proposed as a test for albumin by Tauret, of Troyes, in 1872. Mr. Guy Neville Stephen first called attention to its comparative value in *The London Lancet*. Its method of application is essentially the same as that of picric acid, previously having acidulated the urine with citric or acetic acid. It is claimed to be more sensitive in reaction with albumin than heat and nitric acid, that it is cleanly to handle, very permanent, and almost perfectly clear in solution.

Sodium tungstate was first proposed as a test for albumin by Dr. G. Oliver, of Harrowgate, in *The London Lancet*, Feb. 3, 1883. His method of preparing the test solution is as follows: a mixture of equal parts is made of saturated solutions of sodium tungstate (one in four) and of citric acid (ten in six) in water. It is claimed to be "an albumin precipitant of great delicacy, devoid of objectionable qualities."

Dr. Oliver also proposes in the same number of *The Lancet* as a test for albumin, the potassio mercuric iodo cyanide, but as this is practically the same test as the one last described, it is needless to consider it further.

Potassium ferrocyanide test is simply a saturated solution of the above salt in water. Its application is made by previously acidifying the urine with acetic acid, and adding the ferrocyanide solution, when, if albumin be present, a white cloud is at once formed. This was proposed by Bödeker as a volumetric test for albumin. Dr. Pavy proposed subsequently to make the test with citric, instead of acetic acid, and he also introduced the pellets (compressed) of sodic ferrocyanide and citric acid, which are simply crushed and placed in a test tube containing the suspected urine, agitating without heat.

Dr. Oliver first prepared all of these tests, save

brine, in portable form, so that they could be carried in the pocket-book, and applied at the bedside of the patient. His method consisted in saturating chemically inert filtering paper with the test solutions, and cutting the papers into small strips. An acid paper was also prepared by saturating filtering paper with strong solution of citric acid. The application of these tests are as follows: A small test tube is used, with a capacity of say 60 minims. This is filled about half full of the suspected urine, and a citric paper is rolled up and thrown into the tube. After agitating for a minute or so, one of the other papers is added, say the potassio mercuric iodide, or ferrocyanic, and if albumin be present, a white cloud at once forms about the last paper introduced.

Dr. Oliver has also prepared what he terms the compound papers, made by joining together a citric paper with one of the others. This simplifies the application of the test, inasmuch as but one paper need be used in testing. A full account of these test papers, and their application, is best told in Dr. Oliver's own words, which is done in *The London Lancet*, Jan. 27 and Feb. 3, 1883, or in a small book issued by himself on "Bedside Urinary Tests."

The carbolic acid test, in any of its forms, I have not used, for reasons which will become obvious to any one who tries it in detecting the smaller traces of albumin.

The above, then, in the main, are the newer tests proposed for detecting albumin in urine. It is proper that we next inquire into their advantages and disadvantages, in order to properly estimate their relative values. What I shall say upon this point is the result of a series of experiments with all of these agents, extending over the past eight months, or perhaps a little longer.

As to the test papers, Messrs. E. H. Sargent & Co., 125 State street, Chicago, kindly prepared, at my suggestion, about ten months ago, all these papers, according to Dr. Oliver's method; and as they have been in stock since, they may be procured by any one desiring to try them for themselves. I also procured, about eight months since, through Mr. Hawksley, 357 Oxford street, London, two complete series of Dr. Oliver's own papers, for the purpose of trial; and with all these, I have made careful and repeated experiments. I prefer the potassio mercuric iodide and tungstate papers to all others.

The most serious objection, perhaps, to all these newer tests, is the fact that they give a reaction with other matters, occasionally present in the urine, such as peptone, mucin, parapeptone, and urates, and, moreover, if the patient be taking certain of the vegetable alkaloids, (notably quinine,) or oleo-resins, or some of the alkalies, or even alcohol in considerable quantities, before the urine is voided, a similar reaction occurs, *none of which are distinguishable from albumin precipitate, without the additional employment of heat to the test;* and the latter in some cases decomposes the test solution, (notably the ferrocyanic.)

I think it may be laid down as a rule, to which I at least know of no exception, that *no test for albumin in urine is absolutely reliable unless combined with or followed by heat.* At a temperature of 72° to 75° C. serum albumin coagulates and becomes insoluble in *acid solutions;* and if of any quantity, the insolubility is perceptible in clear solutions in the formation of a more or less opaque cloud. I know of no other bodies met with in the urine, if that fluid be clear, and acid in reaction, which will give a similar reaction.

Of course, in dealing with urine where the amount of albumin is large, most of the ordinary tests are sufficiently accurate to determine its presence beyond reasonable doubt; because phosphates, urates, peptones, mucin, bacteria, or other bodies, which may give a precipitate simulating closely albumin, are almost never present in sufficiently large quantities to throw down a coagulum of the density, appearance and extent of albumin, when present even in moderately large quantities. And hence in those precipitates, filling, say a third, or half of the test tube, we are reasonably safe in assuming at least that albumin is present, whatever else may be also, though the reaction be brought about by most any of the tests in ordinary use.

As to the brine test of Dr. Roberts: it is cleanly, does not soil the hands, or clothing, keeps well, is easily applied, and is a very delicate reagent. In testing for very small traces of albumin, however, it is inferior to two or three others, and one reason for this may be, that it requires so large a quantity of the solution to cause a reaction, that it very much dilutes the urine, rendering detection of albumin in small quantity more difficult.

The sodium tungstate test does not stain, is very clear (the most so of all); its reaction is a little slower than some of the others, but extremely delicate, and properly applied is one of the best of all. It will not answer to apply this test as some of the others are done, namely, to acidify the urine first, and then add the tungstate solution, because an excess of the tungstate may get into the urine and render it inoperative, for it must not be forgotten that tungstate of sodium solution *in excess* in the presence of an acid *dissolves both egg and serum albumin.* We must thus use the test solution, as advised by Dr. Oliver, already described, to make it reliable.*

The picric acid test seems to have excited more discussion than any of the others. It will quickly react with albumin in small quantities, but it has some serious drawbacks for general use. If allowed to mix with the urine (and it is not always possible to prevent this) it colors that fluid yellow, which is unfavorable for detecting faint traces of albumin. Again, if picric acid comes in contact with the fingers (and it often does in manipulating) it leaves ugly stains behind for many days.

In a paper on the "*Clinical Diagnosis of Bright's Disease*," which I presented to the Chicago Medical Society a year ago, I mentioned that I had been in the habit for years of estimating the approximate quantity of albumin in urine by the potassio ferrocyanide solution and acetic acid. Subsequent use in my hands shows that it much less frequently produces

* I have observed that by previously heating the albumin solution to 212° the tungstate in excess will not dissolve it afterwards.

a precipitate with other bodies than albumin, in comparison to the other newer tests.

My reasons for using this test so much in daily work are as follows: In addition to being a fairly sensitive test, as to presence of albumin, it is a fair working volumetric test. I do not mean by this that it is to be absolutely relied upon as an accurate volumetric test, but rather that it will indicate sufficiently accurately the *relative amount* of albumin from day to day to make it valuable as a ready method of comparison in following cases of albuminuria. In using the test, I use a graduated tube, and as the albumin subsides to the bottom after a few hours (twelve) its quantity by bulk may be read off from the scale on the side of the tube and noted at each examination. I now do not use this solution for detecting the *presence* of albumin, because, in doubtful cases, the test can not be corrected by heat; the latter at once decomposes the ferrocyanide salt with an acid, liberating hydrocyanic acid, and producing a white turbidity in the solution, which might be taken for albumin.

The potassio mercuric iodide solution is an extremely delicate test (about equal to tungstate), very quick in reaction, almost clear (slightly bluish), keeps well, and is readily applied.

I have noted one objection which the tungstate does not possess, namely after the test is applied, it cannot be set aside and examined again satisfactorily. The potassio mercuric salt, in the presence of an acid, soon begins to decompose, liberating free iodine which discolors the solution and renders faint traces of albumin difficult to distinguish. This does not so materially detract from the value of the test, as the reaction is not immediate, and it is slow.

Now as to the relative sensitiveness of these tests. Dr. Oliver says, "as a result of many observations and experiments, that in his opinion, one part of albumin may be discovered in 20,000 by the iodo mercuric, picric and tungstate tests; in 10,000 to 12,000 by the ferrocyanide and brine tests, and in 6,000 to 7,000 by the heat and nitric acid tests."

The following are the details of some of my experiments, made with the view of satisfying myself on this point:

The urine of one of my patients was subjected to experiment, who was convalescing from acute Bright's disease. The urine, when experimented upon, contained a trace of albumin, was acid in reaction, sp. gr. at 60° F. was 1022, and contained a few epithelial casts.

1. On the undiluted urine all tests showed the presence of albumen.

2. 50 cc of the urine was diluted with 50 cc of distilled water, and the following noted. Reaction still apparent with all tests.

3. 50 cc of the above was diluted with 50 cc of distilled water, and the following noted. Reaction perceptible with mercuric, tungstate, and picric tests. The others were negative.

4. 50 cc of the above was diluted with 50 cc of distilled water, and the following noted. Mercuric and tungstate test showed faint change; all the others were negative.

The urine of a patient under my charge was next subjected to experiment, who was suffering from slight chronic nephritis (parenchymatous). The urine, when experimented upon, was normal in appearance, and reaction at 60° F., sp. gr. was 1025. A slight trace of albumin was present. The microscope showed a few granular casts and renal epithelium.

1. On the undiluted urine all the tests gave reaction, showing presence of albumen.

2. On diluting 50 cc of the urine, with 50 cc of distilled water, the following was noted. Mercuric, picric and tungstate tests gave reaction. The other tests were negative.

3. 50 cc of the above was diluted with 50 cc of distilled water, and the following noted. The mercuric and tungstate tests still gave faint turbidity. The other tests were negative.

4. 50 cc of above was diluted with 50 cc of distilled water, when all the tests failed to show any change whatever.

The urine of a patient, who was suffering from chronic interstitial nephritis (granular atrophy) was subjected to experiment. Having been under my charge for a year and a half, I knew his urine to average a small amount of albumin (6 to 8 per cent. by bulk) and to contain a few hyaline casts, sp. gr. (at 60° F.) ranged from 1008 to 1018, and reaction usually neutral or alkaline.* It was the latter when experimented upon.

1. Observations on the undiluted urine showed presence of albumin by all tests.

2. 50 cc of the urine was diluted with 50 cc of distilled water, when all tests still showed presence of albumin.

3. 50 cc of above was diluted with 100 cc of distilled water, and the following was noted. Mercuric, tungstate and picric tests showed faint reaction. All others negative.

4. 50 cc of above was diluted with 50 cc of distilled water, and all tests failed to show any perceptible change.

These experiments, and in fact all my experiments, were conducted with the same quantity of urine or solution operated upon in each case, and similar size and make of test tubes were used in all cases. Now with reference to the reaction of certain of these newer tests in dilutions beyond the point where heat and nitric acid fails to give any change. *Is this reaction albuminous?* If it be albumin in minute traces, which these so-called more delicate tests show, where heat and nitric acid fail; it would go far towards proving what Gubler first suggested, in 1865, and afterwards Ultzman, in 1870; and J. Vogel, in 1873; and Johnson, of London, in 1883: namely that traces of albumin may be a constituent of normal urine. While I know of no reason why traces of albumin (probably untransformed) should not be present in normal urine (as sugar is now known to be), if, as M. Leube† claims repeatedly, to have found it present in cutaneous sweat. But before accepting the above as fact, it must first be shown con-

*Autopsy since showed both kidneys contracted and granular; the left weighed 2¾, and the right one less than 3 ounces.

†Virchow's Archiv, Band 48, p. 181.

clusively that certain substances known to exist in urine, closely allied to albumin, are not the ones which these newer tests give reaction with instead of albumin. Bence Jones refers to a peculiar case of this kind.* Baylon describes an albuminoid substance under the name of albuminose, which is said to occur also in normal urine. Peptone-like bodies were found by O. Schultzen and L. Reiss in urine after phosphorus poisoning.† The identity of this peptone-like substance with true albumin peptones is still doubtful. Finally, according to Bechamp, a protean substance can be precipitated from *every normal urine* by three times its weight of 88 to 90 per cent. alcohol, which, after washing, is soluble in water. Bechamp has given it the name of nephrozymose.‡ It has furthermore been stated on high authority, that no test yet known will detect albumin in traces more minute than will the old heat and nitric acid test.

I have conducted a number of experiments with the view of throwing, if possible, more light upon this question, from which I select the following as examples:

First, I prepared a sample of pure blood serum from a healthy man, secured during traumatic hæmorrhage (epistaxis).

1. 50 cc of the above blood serum was diluted with 100 cc of distilled water and double filtered, and on testing the following was noted. The mercuric, brine, tungstate, ferrocyanic and heat and acid (nitric) gave very distinct reaction, showing albumin.

2. 50 cc of the above was diluted with 100 cc of distilled water, and still all tests gave reaction (positive.)

3. 50 cc of the last dilution was mixed with 100 cc of distilled water, and the following was noted. The mercuric, tungstate and brine tests gave the most distinct change. Heat and nitric acid, and ferrocyanic tests were still positive, but considerably fainter.

4. 50 cc of last dilution was added to 50 cc of distilled water, and the following noted. Mercuric and tungstate tests gave the most distinct change. Heat and nitric acid and brine were the faintest.

5. 50 cc of last dilution was added to 50 cc of distilled water, and the following noted. Heat and nitric acid practically failed to show any change, as did also brine. The mercuric and tungstate tests showed distinct change (positive.)

6. 50 cc of last dilution was still further diluted with 50 cc of distilled water, and the following noted. Heat and nitric acid and brine failed (negative.) The mercuric and tungstate gave distinct change (positive.) The temperature of the mercuric and tungstate tests was raised to 212° F. over a spirit lamp. The opacity was *not in the least cleared* thereby.

7. 50 cc of last dilution was further diluted with 50 cc of distilled water, and the following noted. The mercuric and tungstate tests gave perceptible reaction (positive.) The others failed (negative.)

8. 50 cc of last dilution was still further diluted with 50 cc of distilled water, and tests applied as before. The mercuric and tungstate tests both showed very faint but perceptible change (positive.) The others all failed as before.

9. 50 cc of the last dilution was further diluted with 50 cc of distilled water. The mercuric and tungstate tests now failed to show any change whatever. A tube of the diluted serum was compared with the tungstate and mercuric tests, and examined in various lights, but no difference could be distinguished.

The next experiment in this connection was as follows in general terms: The serum was obtained from a vesicated surface on a healthy man (save neuralgia.) The agent employed to produce the blister was cantharidal collodion. The experiment with this serum was conducted precisely similar to the last described, and gave substantially the same results.

I next experimented upon the fresh blood serum (18 hours after death) of a healthy pig; the blood being withdrawn from the carotid artery in killing the animal for use. The experiments with this serum were conducted similarly to those on the human blood serum, and the results were almost the same. A slight difference in favor of the heat and nitric acid test seemed to exist, that is to say, the heat and nitric acid test seemed to give positive reaction a little longer than in the case of human serum, but the mercuric and tungstate tests *unquestionably* detected the albumen diluted beyond the point where heat and nitric acid failed.

I next took 10 cc of human blood serum (from epistaxis case), and after diluting it with 90 cc of distilled water, I precipitated the paraglobulin therefrom, and double filtered. The solution was submitted to the same tests with substantially the same results. The mercuric and tungstate tests unquestionably showing distinct reactions considerably beyond the point of dilution, where heat and nitric acid failed to show any change.

In the case of egg albumen, however, the results will be found altogether different, as I have observed repeatedly; for instance, I took a weak solution of egg albumen in distilled water, and selecting as the most delicate tests, the potassio mercuric iodide and tungstate of sodium, I compared them carefully with the results of the heat and nitric acid test, which were as follows:

1. On the solution, as prepared, all three tests reacted distinctly (positive), showing albumen precipitate.

2. 50 cc of the solution was diluted with 50 cc of distilled water, when all three tests still showed reaction positive.

3. 50 cc of last solution was next diluted with 100 cc of distilled water, when all three gave reaction, though faint. The heat and acid, if anything, most distinct.

4. 50 cc of last solution was next diluted with 50 cc of distilled water, and the following noted. The heat and acid and mercuric tests gave a faint but perceptible change, distinguishable only on comparing them with a similar sized tube of distilled water, in

*Annalen A. Chem. u. Pharm., Band 67, pp. 97 to 105.
†Annalen des Charité Krankenhauses zu Berlin, Band 15, p. 9.
‡Neubauer and Vogel's Analysis of Urine, p. 100, (1879.)

front of a dark background. No change could be perceived with the tungstic test.

5. 50 cc of last solution was next diluted with 50 cc of distilled water, and the three tests applied. On holding them side by side, in various lights, no appreciable difference could be distinguished between any of the tests and a similar tube of distilled water, though examined by several individuals.

Thus it would seem there is a greater difference between the two native albumens (egg and scrum) than has been generally supposed. I believe that heat and nitric acid is a peculiarly delicate and appropriate test for the former, as I have noted in testing, in the presence of minute traces of egg albumen in distilled water, that the reaction produced by heat and nitric acid is considerably more pronounced than by any other test. The coagulum seems more dense and opaque, but it is about equal to the mercuric test as to minuteness of quantity it will detect.

Now as to physiological albuminuria, so-called. It is surprising how many people in apparently perfect health have small traces of albumin in their urine; even by the heat and nitric acid test, if properly and carefully applied, it will probably show traces of albumin in 8 or 10 per cent. of such individuals. I believe, as a result of my own observations, that the majority of people of all ages have traces of albumin in their urine, either occasionally or constantly, as determined by the mercuric and tungstic tests.

A number of observers, Senator, Leube, and lastly Chateaubourg, have recorded results from examinations on a large scale, which are quite startling to believers in the pathological significence of albumin in small quantities in urine. Chateaubourg, of Paris,* within the past year, has made a large number of examinations on healthy individuals, of which the following are a few of the results: 98 soldiers, from twenty-one to twenty-five years of age, were first selected and their urine obtained on *Monday* (hence there was no fatigue duty the day previous), 3 hours after the midday meal. Of the 98 samples, 44 showed the presence of albumin.

In July, 1883, he tested the urine of 94 soldiers, five hours after a meal, and 76 contained albumin, 82 per cent. He examined, at the *Hôpital des Enfants Assistés*, the urine of 142 healthy children, from 6 to 15 years of age, 111 of which contained albumin. Of 231 soldiers, on fatigue duty, whose urine was examined, he found albumin in 201 cases. I believe the test used by Chateaubourg was the potassio mercuric iodide. It cannot be claimed, that in all these cases the albumin was the result of pathological change, however slight; for Chateaubourg distinctly says, the urine of many of these cases was submitted to the microscope without finding any evidence of kidney lesion.

I have personally obtained very similar results from observations on a considerable (though smaller) number of cases. I have examined the urine of many healthy persons, where the urine was otherwise normal, save that it showed the presence of albumin on the application of the mercuric and tungstate tests, but no reaction could be found with the heat and nitric acid, however applied. When I say, the urine of these persons was normal, I mean in appearance, sp. gr., in quantity and reaction, and I carefully examined it with the microscope, going over several slides, but failed to find casts, renal epithelium, or bacteria.

It may be thought, perhaps, by strong believers in the delicacy of the heat and nitric acid test, that where it failed, and other tests showed albuminous reaction, the failure may have been due to want of the precautions necessary to insure success. So far as my own manipulations at least are concerned, this could not very well be the case. I am aware of the fact, that of all tests the heat and nitric acid requires the most care and precaution to insure accuracy.

One of the most serious objections to the heat and nitric acid test, especially in cases where albumin is present only in small quantity, is the fact that if the acid be not added in sufficient quantity, we sometimes fail to get any change; and, on the other hand, if too much acid be added, it will dissolve small traces of albumin: thus in either case the test may be negative.

My friend Prof. Walter S. Haines, of Rush College, has suggested to me a method of procedure, which I think obviates this difficulty. In applying the nitric acid to the urine, he inclines the test tube quite obliquely, and thus allows the acid to flow slowly down the side of the tube and through the urine (which latter it does owing to its greater gravity) to the bottom, leaving behind, the urine acidified in increasing intensity, each layer from the surface to the bottom. Some of these strata will be found of exactly the proper acidity to give the albuminous reaction.

In all cases where heat and nitric acid failed, and other tests showed any change, the former was given the benefit of most careful application, *and repetition* in several forms, among others the double method of Dr. Brown-Sequard,* was *always tried;* also the method of complete cooling and re-application of heat, as advised by Tyson.† In fact, the heat and nitric acid test was given by far the most care and attention of all, because, after the results obtained with it on egg albumen, I was working under the conviction that the heat and acid test would, *if properly applied*, reveal the presence of albumin, where any other known test would do so; for I had made my observations on egg albumen before I had experimented upon blood serum.

From the sum of my observations I draw the following deductions:

First:—That certain of these newer tests, as the potassio mercuric iodide, sodium tungstate, picric acid, and perhaps the brine and ferrocyanic, will detect *serum albumin* in more minute quantities than will the heat and nitric acid test.

Second:—That the most delicate and reliable of these, and possessing the fewest objections, are the potassio mercuric iodide and sodium tungstate tests.

Third:—That the test papers of Dr. Oliver, especially the sodium tungstate and potassio mercuric

*Chateaubourg Recherches sur l'Albuminurie Physiologique, Paris, 1883.

*Archives of Scientific and Practical Medicine, 1873.
†Practical Examination of Urine, 1883.

iodide, are handy measures for preliminary examinations of urine at the bedside of the patient for determining the presence of albumin in the urine.

Fourth:—That to be entirely reliable, the correcting influence of heat must be employed in applying all these newer tests.

Fifth:—That the potassio mercuric iodide, and sodium tungstate tests, and also the test papers of Dr. Oliver, are undoubtedly valuable acquisitions to our resources; inasmuch that through their greater delicacy and more ready applicability, they are likely to lead more frequently to resort to the microscope, and thus detect the early stages of certain forms of nephritis, which might otherwise escape observation, till too late to save or prolong life.

Sixth:—That the question of the near future, as to albumin in urine is likely to be, not only is it present, but *what quantity of albumin in the urine constitutes a pathological condition?* and this question must be largely determined by the microscope.

68 MADISON ST.

EXPECTANT TREATMENT IN SOME CASES OF ABORTION.

BY ADDISON H. FOSTER, M.D.

Mrs. A., American, aged 30, multipara, was taken, Christmas day, 1877, with severe labor pains, and expelled a four months' fœtus with very little hæmorrhage.

She being very fleshy, the firmly contracted os could barely be reached, and no active interference for the delivery of the placenta was advised. After a rest in bed for a week the patient was allowed to resume her usual household duties. Every few days a little hæmorrhage occurred, with some pain, and about once a month a portion of the placenta was expelled, until the 30th of April, or after four months, the last piece, the size of the thumb, came away as fresh and healthy as any before it. There never occurred any serious hæmorrhage or severe pains during the four months, and very little medicine was taken. The patient often went to town on the street-cars, a ride of over two and one-half miles; was in bed but a few days in all, and never had any symptoms of inflammation, and repeated digital examinations always disclosed a firmly-contracted os, with no tenderness. She helped to move May 1, and made an excellent recovery without any untoward result.

August 15, 1880, she again aborted at the fourth month, the placenta remaining under circumstances similar to the first. Upon getting up, after a week, considerable hæmorrhage and local tenderness occurred. A tampon of carbolized cotton arrested the hæmorrhage and allayed all the tenderness, so that the patient was up and about immediately, until October 18, when the secundines came away entire with very little hæmorrhage, and no local tenderness or troubles followed.

In March, 1881, she again aborted at about three months, and the placenta was discharged entire in two weeks, with no serious hæmorrhage. She was doing well until one cold evening two days after, contrary to orders, she got up and went to the theater, bringing on considerable metro-cellulitis, which was aggravated almost constantly by the obstinacy of the patient in refusing to remain quiet. I believe she would have had no complications if she had rested in bed for two weeks.

This case illustrates others in my experience, where, with a firmly contracted os and *no* material hæmorrhage, especially in a fleshy patient, with the uterus beyond easy reach without introducing the hand into the vagina, the organ is left to the efforts of nature, with satisfactory results.

Repeatedly I have seen the placenta expelled a few days after the use of the carbolized tampon, with very little hæmorrhage, pain, or subsequent trouble, when the pain and tenderness had been considerable before the tampon was used.

Hence I am advocating the "vis conservatrix naturæ" in occasional cases of abortion, rather than *constant* violent manual interference in every case, of whatever nature.

SUGGESTIONS ON THE EXAMINATION OF THE EYES OF APPLICANTS FOR PENSION.

BY J. L. THOMPSON, M.D., PROFESSOR OF EYE AND EAR DISEASES IN THE MEDICAL COLLEGE OF INDIANA.

(Read before the Mitchell District Medical Society, Dec. 28, 1883.)

In the examination of the eyes of applicants for pension, a more thorough knowledge of the anatomy, physiology and pathology of the organ is needed than in one's ordinary private practice, for the following reasons, to-wit:

1st. Many of them are impostors, who really have nothing abnormal about their eyes, they, in many instances having been induced by pension agents to add eye disease to their many other real or supposed infirmities.

2d. Others have slight disease, or abnormal condition, which they greatly magnify.

3d. In others, disease may have at one time existed and now have disappeared; but once having been on the pension rolls, they dislike to have their names stricken therefrom.

4th. Many present themselves whose troubles originated prior to their enlistment, or subsequent to their discharge from the service.

5th. Others fancy themselves entitled to a pension on account of failing sight incident to age, and other factors which we know have nothing to do with exposure incident to army service.

6th. On the other hand, many have been stricken from the rolls, or rated too low, or never pensioned at all, because the medical examiner has either failed to detect existing disease, or underestimated its gravity.

Examiners should always be provided with test-types of Snellen or others, remembering, though, that the applicant in many instances will not admit that he can read as well as he is able to, but tact and good judgment on the part of the examiner, aided by convex and concave glasses, will rarely ever fail in aiding him to reach a just conclusion in any case.

One should always have at least the following number of lenses: Convex, $^1/_{42}$, $^1/_{15}$, $^1/_{10}$, $^1/_5$. Concave, $^1/_{30}$, $^1/_{20}$, $^1/_{10}$, $^1/_5$, $^1/_3$, for the purpose of determining whether there is an anomaly of refraction. I have skipped over many numbers, as we simply wish to determine whether an anomaly exists, and not its exact degree. Then, one needs a convex lens of two or two and a half inches focal range for the examination by oblique illumination—a means of incalculable importance when we wish to detect disease in the cornea, anterior chamber, iris, crystalline lens, anterior and posterior capsule. To use this aid, one simply needs to have a lamp placed on a level with the patient's eye and obliquely in front and to the side of the same. By this means a pencil of rays may be so thrown upon the eye as to reveal that which cannot possibly be determined by one's unaided senses. It must be practiced on healthy structure first, and practice will soon teach us at just what angle to place the light, which, if too far in front or too much to the side, will not answer the purpose.

Then, one should be provided with one or two prisms set in a large frame, say two of 5° each; one with its base placed directly upward, and the other base downward. These are preferable to colored glasses combined with prisms, in cases where the applicant complains of blindness or defective vision in one eye. Prisms placed as above necessarily cause diplopia, (double vision), and with tact one can very quickly detect which is the defective eye, by simply having the person examined to close his eyes until a given signal, when, after placing these upon him, we hold a large white sheet of paper before him with a round, black spot, cross or other mark in its center, about one foot from his face. We tell him to open his eyes and quickly tell us just where they (the spots) stand, whether the lower spot is to the right or to the left of the upper, and which one is the plainer, etc., etc. If one meets with an old practiced hand at deception, he will commence winking and blinking and shutting first one eye and then the other, but we must then quickly raise the glasses and withdraw the paper from him or he will quickly detect the scheme. All that is necessary is to practice this on oneself to thoroughly understand the action of prisms, when many other methods of using them will be suggested.

Always have a mydriatic as well as a myotic at hand, so as to be able to dilate or contract the pupil, if needed. And if you wish to know all about any given case, provide yourselves with an ophthalmoscope also, as every disease behind the lens is a sealed book, objectively, without its aid. But, fortunately, a great majority of the cases which come up for pension are those where the anterior portions of the eye are diseased.

Were these examinations usually made by the younger members of the profession, no excuse should be offered as to one's inability to use this instrument. But it is a fact that nearly all of the medical examiners are gentlemen of at least twenty years' standing in the profession, whose hours are so occupied as to prevent the long continued practice with the instrument necessary to its proper use, for it is a well known fact to experts that it requires as much daily practice with it as is necessary to the acquisition of a foreign living language. I have met with cases where physicians have brought patients to me, just simply for a confirmation of diagnosis and prognosis, where they have used the ophthalmoscope and found no disease of the fundus of the eye; and yet I have silently, in their presence, made drawings of the gravest possible lesions. Not that I claim any superior skill in its use, but simply mention it to show that one must practice long with it before he dare pronounce positively in cases where it has been brought to one's aid.

We will now suppose that an applicant presents himself for examination. Look at his eyes thoroughly before touching them, as the slightest eversion of the lower lid will often cause such a congestion of the conjunctiva as to throw one off his guard in diagnosis. This one thorough glance takes in the surroundings of the eye, lachrymal derivative apparatus, eyelids, their movements, tarsal margins, etc., etc. We notice whether any of the ciliæ are inverted, or whether there is slight eversion of the lower punctum lachrymalis, remembering that if it does not hug the eye-ball closely, stillicidium, with its accompanying thickened lids and reddened conjunctiva, is always present. We notice the movements of the eye-ball, and if inverted or everted; we determine whether this is from strabismus or paralysis. Then the white of the eye, the cornea, the iris, and the lens, beyond which we cannot go without the ophthalmoscope.

We will now notice some of the affections which are very liable to be overlooked or underrated. One of them is

Cicatrization of the Superior Palpebral Conjunctiva.—Persons troubled in this way tell us that though their eyes feel very well when they present themselves before us, yet when they are called upon in harvest or threshing time, or to work in the hay-mow, or in burning brush, or in high winds, or any similar irritating employment, their eyes become very sore, and they are often disabled for weeks. In such cases the eye looks perfectly normal until we evert the upper lids, when, instead of the beautiful, smooth conjunctiva with the pearl-like meibomian glands seen beneath it, we find said conjunctiva cicatrized and hard, bound closely to the tarsal cartilage, which it very much resembles. In such cases we may rest assured that long ago the applicant had a long continued granular conjunctivitis, and that as these neoplastic growths were absorbed they destroyed the conjunctiva from which they sprang. All such persons should be pensioned, and no person so affected should ever be admitted to the army, no matter how well he sees, nor how well his eyes look, nor how much he protests that his eyes are just as perfect as any one's.

Nebulous Opacity of the Cornea.—This is an affection frequently overlooked, and many a poor fellow has had his claim rejected or his pension cut off, while

stoutly protesting that his vision was very poor. The reason of this is, that the unaided eye cannot readily detect these cases; but no sooner does one resort to oblique illumination than the case is immediately apparent, and it is astonishing how very much the thinest, faintest possible opacity of this kind will reduce the acuity of vision.

Large, Dense Opacity of the Cornea.—Where the cornea is white throughout its whole extent, or where it has entirely sloughed away in one or both eyes, be sure to thoroughly investigate the case as to the origin being in a gonorrhœa. 'Tis true, the case may come on from other causes, but do not forget this one fact deduced from extensive experience. The following case is interesting: X. Y. called on me several years ago, with a copious discharge streaming from his eyes. He told me that he was recently under a doctor's care, and that said doctor had used a foul brush in his eyes, and in that way had poisoned them. I asked him if he had the clap, which he vigorously denied. He went to another physician, but came back to me in just one week with both corneæ sloughed off. He threatened suit against the doctor alleged to have used the foul brush (an irregular, advertising doctor). So, to fully convince myself, I compelled him to allow me to examine his genitals. I then found a copious stream of pus from the urethra, on stroking the organ. His attorneys called upon me after they had commenced suit, and, after hearing what I had to say, dismissed the case. Three or four years afterwards this man applied for pension, for total loss of his eyes, the result of disease contracted in the army. Fortunately, the Board of Examiners sent him to me for an examination, when I gave them my former experience with the case. How this matter is to be settled, so that due justice may be done to all parties, I would very much like to know. That he contracted some form of disease while in the army he can prove, and that he was under treatment for the same when he contracted the gonorrhœa which destroyed his eyes, is also well known. But the solution of this knotty point I will leave for this society and the medical referees at Washington to determine.

Diseases of the Iris.—If one is not especially on the lookout for it, no trouble is more liable to escape one's notice than synechia posterior (adhesion of the iris to the capsule of the lens); it may be partial or total, with or without a false membrane in the pupil. Where a false membrane exists, it is liable to be mistaken for cataract. Whenever adhesions exist the eye is in great danger from occasional recurring iritis, which goes on until either the pupil is closed with or without said false membrane, or a total synechia posterior prevents the interchange between the anterior and posterior aqueous chamber, when the eye is ultimately lost from the glaucomatous process being set up, or from an irido-choroiditis. Sometimes these cases follow ulcerative keratitis, from malarious and other causes, sometimes from rheumatism; but remember that all iritic diseases should be thoroughly investigated, owing to the fact that great numbers are of syphilitic origin, especially where one notices no corneal complication nor evidence of rheumatism.

Choroidal and Retinal Diseases.—These can only be determined positively by the aid of the ophthalmoscope. Many have been rejected when no disease could be seen, and yet had the ophthalmoscope been used atrophied patches or pigmentary deposits might have been seen just as plainly as one sees the fruit in a freshly cut plum-pudding. Here, with this instrument can one detect between retinitis pigmentosa of congenital origin and that which is acquired later in life, as is seen in these two typical cases (shown to the society). The one was taken from a lady, æt. 30 years, and you see the deposits are like miniature blackbird's feet, and are very peripherally situated, only a few approaching near to the macula-lutea. The other was taken from a gentleman, about 48 years of age, where it followed an exhausting diarrhœa, in one of our Southern prisons during the late war. Here you see the patches are larger, more irregular and more centrally situated; both of them were sight-blind, as are all cases of this disease.

DISEASES AND ANOMALIES WHICH ANTEDATE ENLISTMENT.

Progressive Myopia.—Applicants often tell us that they had very good vision when they entered the service, but that during their army life their eyes became diseased, and that since leaving the service their vision has gradually or rapidly become worse. We find that they can not see test types at all, but if the man is honest he may admit that he sees some of the letters on the wall when a powerful concave lens is placed in front of the eye. Or he may want a pension more than a thorough examination, and may not admit that he sees better with any glass. In such cases one can not examine without the ophthalmoscope; but with it one may measure the degree of the myopia to within a half an inch, and can find a crescent on one side of the optic disc extending from the same, corresponding to a posterior staphyloma (bulging backwards of the back part of the eye) and often besides this large white patches where the choroid is atrophied and the sclerotic is to be seen behind.

Nystagmus (Oscillation of the Eye Balls).—Whenever this disease or symptom of disease is met with you may depend upon it that it occurred before the second year of infancy, except in the rarest cases possible, such as in paralysis agitaus, in confirmed drunkards, and in some brain or spinal affections. A typical case is as follows: A medical examining board sent a case to me where one eye was very much turned outward from divergent strabismus, he had nystagmus, and a very high degree of progressive myopia with its accompanying staphyloma porticum and white patches in the fundus, from sclerotico-choroiditis posterior. His vision was very poor. The board reported the facts to Washington, stating that the disease was not contracted in the army, but the case was returned to the board with instructions for a further examination, owing to the fact that the man had furnished evidence that he had shot at a mark and done many things which called for a tolerably fair degree of vision, and it was asked of said board if it were not

possible, in the light of this evidence, that they had done the man an injustice? It was not possible, it was a very well-marked case of an everyday occurrence in a large ophthalmic practice: triple evidence of its early origin was plainly manifest, nystagmus, divergent strabismus and progressive myopia. What more conclusive evidence could one wish for?

Suppose he could shoot at a mark. I have known men to shoot remarkably well, even though vision only equalled $^{20}/_{100}$ with both eyes. His may have been even better than this in one eye while in the army, but I question very much its equalling $^{5}/_{100}$ in the one that had such a high degree of divergence. This brings us to

Strabismus and Paralysis.—Strabismus is usually the result of an anomaly of refraction. In the convergent form the eye is hypermetropic (rays of light are brought to a focus behind the retina), while in the divergent the eye is generally myopic (the opposite to the above). Strabismus usually comes on before the fifth year of childhood, and wherever it settles on one eye the person has binocular vision (as a prism will show) and he becomes amblyopic from exclusion (weak from disuse). 'Tis true an opacity of the cornea or other blemish sometimes causes it, but that can easily be detected as can the date of its occurrence. Paralysis, on the other hand, is caused by wounds, brain disease, rheumatism and above all syphilis. Always investigate paralysis of the ocular muscles thoroughly, and never confound it with strabismus.

DISEASES AND ANOMALIES INCIDENT TO AGE.

Senile Cataract.—This, as its name indicates, occurs in those who have passed the meridian of life. It comes on slowly; dimmer and dimmer becomes the sight, until blindness is the result. No inflammation; no pain; nothing but a failure of the nutrition of the lens, with gradual and steadily increasing opacity of the same. It is usually entirely independent of any disease contracted while in the service. Cataract may be caused by blow, or punctured wound, or from a choroidal inflammation, but it usually follows very quickly upon them; while the senile variety we meet with is in those now past fifty, who left the army with very good vision, or they may have had some conjunctival trouble for which they were treated while in the service, and as their eyes may have troubled them occasionally since their discharge, they attribute the gradually failing sight to their former trouble, for which probably they may have been drawing a pension. It is in just such cases where the line of demarkation should be strictly drawn. The government is justly indebted to such for the disability caused by the superficial trouble, but in no way for the blindness caused from cataract, as it is in no way incident to army life. Cataract is very easily detected with the plain mirror of the ophthalmoscope, or by oblique illumination. If the anterior or peripheral parts of the lens are first affected, the latter is sufficient; if only the posterior pole, the ophthalmoscope must be used.

Presbyopia in Hypermetropes.—Presbyopia is also an anomaly which creeps upon us just as certainly as does age, but if we are emmetropic (in optical measure) it only annoys us for close objects; distant ones are seen almost as distinctly as ever, but let one be hypermetropic (a condition where rays are formed behind the retina) and he is very much troubled for distant objects as well as close ones. Now, suppose one so affected (and they are numerous), had some slight eye trouble while in the service, he immediately supposes that his present failing sight is due to the former trouble, and that he should be pensioned for the same. To detect these cases, convex glasses are required, and the strongest glass, with which one sees the best across a room, or at infinite distance, indicates the degree of the manifest hypermetropia. It has no connection with army service.

Many other affections might be mentioned, but these are the main ones upon which you will be called to pass judgment.

Resume:

Cicatrization of the superior palpebral conjunctiva, even though the eye looks perfectly normal, is a just cause for pension.

A slight nebulous opacity of the cornea is easily overlooked, except by oblique illumination.

Iritic adhesions are easily overlooked, except by the use of a very delicate and oblique illumination. They are seeds of ultimate destruction unless loosened. Look for syphilis when no other cause is apparent.

Progressive myopia has its origin in childhood, but may not seriously affect vision until much later in life. It is usually accompanied by staphyloma posticum and sclerotico-choroiditis-post.

Nystagmus (oscillation of the eyeballs) is usually accompanied by defective vision, and usually has its origin in early childhood.

Strabismus is generally an affection of early childhood, and when confined to one eye, it soon very much impairs the visual acuity, and the subject has not binocular vision.

In total destruction of the cornea and in leucoma (large white opacity) investigate thoroughly for gonorrhœa.

Where the eye is turned from paralysis, and no evidence of wound of head, or eye, or of brain or spinal cord is seen, look for syphilis.

Senile cataract usually comes on long after the applicant has left the service, and though he may have evidence of granular lids or chronic conjunctivitis, and may be already on the pension rolls, still, in ninety-nine cases out of a hundred, the cataract is entirely independent of army life.

Presbyopia, wheh occurring in hypermetropes, affects vision for distant as well as close objects, and often leads the applicant to believe it to be incident to army life.

All lesions behind the lens are a sealed book, objectively, unless one resorts to the ophthalmoscope.

Allow me to say, in conclusion, that in eye diseases, a mistake in diagnosis is almost impossible, when one knows what to look for, and yet it is a fact beyond contradiction, that greater ones are made than in any other part of the human economy.

MEDICAL PROGRESS.

HYGIENE.

THE PAVILION OF DR. KOCH FOR THE EXPOSITION OF HYGIENE AT BERLIN.—A writer in the *Revue Medicale of Louvain*, gives us a very interesting description of the workshop and museum of exhibit of Dr. Koch. It appears that in 1876, the Imperial German Government established a central committee to supervise the sanitary condition of the Empire, and to contribute directly, by especial researches, to the progress of hygiene. This committee, called the Reichsgesundheitsamt, was composed of five persons who were to collect, arrange and exhibit all material pertaining to the study and practice of hygiene, and to give its aid to the Minister of the Interior in the study of questions relating to hygiene, and in the preparation of laws and administrative measures relative to the same subject. In 1878 the committee was enlarged, and the Government appropriated generously the funds necessary for thoroughly equipped laboratories for original researches intended to solve certain important hygienic problems.

The building itself is located in the center of the medical quarter of Berlin. It consists of a very large house with a cellar, ground floor and two stories, with laboratories for chemistry, hygiene and experimental pathology, numerous work-rooms, a statistical bureau, library, lecture-room, consultation room, dwelling-rooms for the Director, and chambers for the assistants, with, finally, motor apparatus, rooms for disinfection, for combustion, for incubation, dark chambers, photographer's room, etc.

The *personnel* is made up of a Director, Dr. Struck, and four ordinary members, viz.: Dr. Koch, Prof. Roloff, of the Royal Prussian School of Veterinary Medicine, Profs. Sell and Wolfftingel, of the University of Berlin; of nine assistant physicians, and a sufficient number of employés to perfect the service. Besides these there are 25 extraordinary members chosen from among the most eminent hygienists in the principal cities of Germany. The Reichsgesundheitsamt erected a pavilion in the park of the Exposition of Hygiene, which contained two laboratories. 1. A laboratory for the analysis of alimentary substances. 2. A laboratory for researches into infectious diseases and the modes of disinfection. Entrance into this pavilion is interdicted to the non-medical public, which the writer from whom we quote criticises, having, as he says, seen a lively interest displayed by those not initiated in the mysteries of medicine, at seeing displayed before their eyes the chemical analyses of alimentary substances, and noting the tabular statements of the comparative nutrient value of different substances. The ocular demonstration of the purity of water and air through the bacterioscopic culture; the adulteration of milk, etc., must have a certain useful influence upon the mass.

Dr. Koch commenced his work on the microbia when he was a country physician, a *Kreisphyricus*, in a very small village of Silesia. It was in the midst of his duties as a practicing physician that he commenced and carried on those admirable labors which mark an epoch in our knowledge of the infinitely minute world. Gifted with sagacity and an exceptionally clearsightedness, joined with dexterity and the spirit of order and method, and with an indomitable perseverance, he made his first essays like those of a master. With a sober manner, and a style that is clear and curt, the most of his works are spread over but few pages, but every question submitted to his researches comes back perfectly answered from his hands.

To affirm that a given disease is the product of a special germ, Dr. Koch exacts the three following conditions:

1st. The germ should be be found in the diseased organism, in its secretions or excretions; it must be found in such forms and groups as show its special and characteristic dispositions.

2d. The germ must be capable of cultivation out of the body, and isolated from all living material and other germs.

3d. The germ so cultivated must be capable of being reproduced in the living organism of the original disease.

If these three conditions are satisfactory, the proof is complete.

1st. To ascertain the presence of the germ, Dr. Koch uses the simple and direct means, but more generally calls to his aid the aniline staining fluids, which possess a special affinity for the germs or microbia; and in the pavilion are to be seen the Abbe condensor, the different models of microscopes used in laboratories, and all made by Zeiss, of Jena.

2d. The microbia are sown in a suitable medium and kept at a proper temperature, where they multiply with a differing degree of rapidity, according to their species. As the use of a liquid medium presents certain objections, which render it difficult, laborious, long and uncertain, Dr. Koch, in searching for a more solid medium, has utilized the potato, which he sterilizes by first soaking it in a solution of corrosive sublimate for an hour, and then places it on a sieve in an iron box holding water to the depth of several centimeters, over which this is placed. The box is closed by a cork pierced by a thermometer; the temperature is raised to 212°, and kept so for from one-half to one hour. The potato is cut with a heated knife-blade quickly, and in as pure air as possible, a drop of the liquid to be examined placed upon it, and the whole covered by an hermetically sealed bell glass. Each species develops its own peculiar form of culture islet, which can be recognized by the naked eye. Thus, one sees a group of the micrococcus prodigiosus, the bacteria which gives the green color to pus, the *bacterium anthracis*, or, and here bread is preferred as the medium of culture, the *oidium lactis*, the *aspergillus glaucus*, etc.

By the aid of gelatine Koch is enabled to study cultivation in alimentary substances, such as the bouillon of different meats, saline solutions, Pasteur's liquid, etc.; it has the advantage of jellifying at the temperature suitable for the cultivation of these germs, but the disadvantage for others, as for milk, of liquifying at a higher temperature. In this way

he obtains the germs of chicken cholera, of typhoid fever, erysipelas, anthrax, septicæmias, the *bacterium termo*, etc. In the study of the germs which produce lactic fermentation, butyric fermentation, blue milk, etc., these germs have been so far isolated and cultivated, that it would seem as if before long the mystery attendant upon the numerous alterations of milk would be unveiled in its minutest details. As has just been said, gelatine not proving suitable, Dr. Koch takes the blood serum, pure, or gelatinized to facilitate its coagulation. He selects, by preference, the blood of an animal subjected to the disease of which he desires to study the germ. It (the blood) is taken from the carotid and collected carefully in a vessel, where it is allowed to remain until the contraction of the clot expresses the serum, which serum is then taken up by pipettes previously heated, and distributed into a series of test tubes, that have also been sterilized by a prolonged heat of 302° to 320°. The serum in these test tubes is then sterilized by being placed in a suitable vessel, and submitted daily to an hour's temperature of 136.4° F. for about six days. This results in a feeble coagulation of the serum, which remains transparent and quasi-gelatinous. To prevent the water of the serum from resting on the top, the tubes are laid obliquely. To carry on these investigations properly a delicate regulation of temperature is necessary, and for this purpose the thermostat of Arsonval is used, which allows of a constant heat to $^1/_{10}$ of a degree centigrade. The culture of the bacillus of tuberculosis has been so made, and in the same way the bacillus of glanders, of osteomyelitis, the microbia of the septecæmia of the rabbit, of the turkey, etc., etc.

Much laboratory work has been done in the bacteriscopic examination of the air, the water and the soil. To examine the air of an apartment it is simply necessary to expose sterilized slices of potato, upon which the germs fall and colonize themselves. For water, a weak solution of gelatine with the necessary nutrient salts, is mixed with a small proportion of the water, left to the surrounding temperature, and in a little time the solidified gelatine shows whitish or grayish granules, which the microscope resolves into colonies of special germs. To estimate the proportional quantity of these germs, the contaminated gelatine is spread out on a large plate of glass over paper that has been ruled and counter-ruled so that a rapid and satisfactory count of the islets of microbian vegetation can be made. Thus are to be seen the fractions of a drop of the water from the canals of Berlin, of pump water of the public fountains, of sewer water, and of the water of the river Sprée, above and below Berlin, these last demonstrating in a striking manner how water becomes contaminated and how it purifies itself by nature's processes. Nothing is more curious than to examine these plates covered with little clods of turf, islets of dust, white, green and brown spots, little collections of pearls and a crowd of special forms, so diverse as to appear like a public park or garden in miniature. As in all the other analyses, each variety of vegetation, after being carefully examined by the microscope to ascertain its purity from all foreign mixture, receives an isolated culture with the most diverse substances, in turn submitted to its influence.

3d. Finally comes the reproduction of the original disease by the aid of the artificially developed germs. This has definitely proven for the microbia of charbon by Pasteur, of tubercle by Koch, and for the bacteria of glanders, the coccus of erysipelas, etc. The pavilion displays numerous anatomical specimens from rabbits, dogs, and other animals that have been inoculated with the bacteria of tuberculosis, cultivated to the tenth, twentieth, and higher generations, and which demonstrate positively the presence of tubercles in the different organs. Other specimens show the inoculation of the cultivated bacteria of glanders on the rabbit and on the horse. The nasal mucous membrane and the ulcerated ears so exhibited give the most positive evidence of this infection. A group of photographs on glass completes the series of objects exhibited. These direct reproductions of the different varieties of the known pathogenetic inferior organisms, as well as the disposition they affect in the diseased organs, are for the most part, in spite of the often enormous enlargement which they have undergone, of an absolute sharpness and admirable precision of detail.

MEDICINE.

THE USE AND ABUSE OF THE MACKINTOSH.—A late number of the *Lancet* has a very practical article under this heading, and for our purposes the word mackintosh can be rendered gossamer or rubber coat. It says: "The season has set in for wearing mackintoshes. A caution may be therefore not unnecessary, and let us hope, not unheeded, as to the use and abuse of this serviceable, but, when improperly employed, dangerous article of clothing. When once a mackintosh is put on to defend the body from wet, it should on no account be taken off until the wearer has not only taken shelter, but is in a position to change his clothes. What a covering of oiled silk does for a wet rag in surgery—namely, convert it into a poultice—the mackintosh does for the clothes of its wearer. The insensible perspiration, which finds a way of escape through ordinary clothing, is kept in by the waterproof, and the clothes are saturated with moisture. A very few minutes will suffice to render the under-clothing "damp" under a mackintosh, particularly if either the wearer perspires freely, or the weather be what is called "muggy," as well as wet. When, therefore, the wearer of a mackintosh takes off that article of clothing, because it has ceased to rain, he is in the position of a person who has damp clothes on, and if he sits in the saddle, or walks home, or rides in an open trap, he is more likely to take cold than if he had not used the mackintosh at all. If, therefore, we say, a mackintosh is once put on, it should on no account be removed until the clothes can be changed or dried by a fire without reduction of bodily temperature. The use of a mackintosh is to protect a man from a severe storm of rain. His clothes must be damp if he wears one of these protectors. The sole gain from using it is to render the moisture warm instead of cold, and

to prevent loss of heat by evaporation. If the mackintosh be removed, evaporation commences immediately, with all the consequent risks of that process."

A NEW TREATMENT FOR NEURALGIA.—The latest agent introduced for the relief of neuralgia is a 1 per cent. solution of hyperosmic acid, administered by subcutaneous injection. It has been employed in Billroth's clinic in a few cases. One of the patients had been a martyr to sciatica for years, and had tried innumerable remedies, including the application of electricity no fewer than 200 times, whilst for a whole year he had adopted vegetarianism. Billroth injected the above remedy between the tuber ischii and trochanter, and within a day or two the pain was greatly relieved, and eventually quite disappeared. It would be rash to conclude too much from these results, in the face of the intractability of neuralgia to medication, but if it really proves to be as efficacious as considered, hyperosmic acid will be a therapeutic agent of no mean value.—*Lancet.*

TUBERCLE INFECTION THROUGH FOOD.—We translate the following notice, by Wernich, from the *Centralblatt f. die Med. Wissenschaften* for Nov. 10: In the *Bayerisches ärztt. Inteltigenz-Blatt*, 1883, No. 26, Herzevich reports the history of two girls, sisters, aged respectively fifteen and three months, who, after being nursed by an undoubtedly phthisical mother, the first for five months, the second for three, were reared and fed on soup, milk and pap. The mother adopted the following disgusting method of feeding: She first chewed the food herself, then spat it out into a spoon, and gave it to the children. So long as she had little expectoration, the children bore this feeding well; but so soon as her expectoration became abundant, although the children continued to take their food with appetite, they both rapidly emaciated; ulcers formed in the throat and insides of the cheeks, some large and of irregular shape, others small and round, both with infiltrated edges; and extensive swelling of the lymphatic glands occurred. Severe fever, putrid diarrhœa, and progressive atrophy caused the death of both children within a month of one another. The post-mortem appearances were the same in both. All the mediastinal lymphatic glands were swollen and caseated; caseous nodules occurred under the pleuræ and scattered throughout the lungs, also in the liver, spleen, and of smaller size in the kidneys—in other words, there was present tuberculosis pulmonum, hepatis, renumet lienis, lymphadenitis caseosa. The mother survived the children for some months, and died after extensive destruction of the lungs had occurred. It is worthy of remark that her children by a former marriage showed no signs of phthisis; also that the two children in question, so long as they were suckled by a comparatively healthy mother, remained themselves healthy. As the author says: "This important case has all the value of a pathological experiment, and must be considered as a pure case of tuberculosis derived from infected food." —*Dublin Journal of Medical Science.*

FOWL'S GIZZARD PEPSINE.—Dr. D. J. Macgowan reports that among the drugs exported from Wenchow, there is one which merits notice from the attention that the article has lately received from Western pharmacologists,—fowl's gizzard. It became an article of the Chinese materia medica in the early half of the eighth century A. D., having been employed probably in domestic practice long antecedently. The properties of the drug known as ingluvin, which is prepared from the gizzard of the fowl, are wholly due to the internal membrane of that viscus. It is supplied to the shops by cooks of eating establishments, who in dissecting out the membrane are careful not to wet or waste the secretion, and thus portions of the bird's food are sometimes found adherent. When dried, the article, from its plicated form, resembles a scallop shell; its color is a pale olive yellow, and it is very brittle. It is often found wasted or charred nearly black, and for the most part is employed in that form. It is generally boiled with other drugs; in a few cases it is administered unburnt, mixed with wasted rice, both being triturated together. Fowl's gizzard is employed by the Chinese largely in bowel complaints of children, but particularly in urinary disorders, curing them of a malady that is indicated by "milky urine." It removes abdominal tumefactions, corrects incontinence of urine; it is valuable in spermatorrhœa, leucorrhœa, and in flooding following delivery; it corrects nausea, and is used to allay morning sickness in pregnancy, but of course its main use is in indigestion. In domestic practice the lining of three gizzards is thought sufficient for an ordinary case, the whole being taken in the course of 10 days. It is enjoined that hens are to be used for men, but in practice no sexual distinction is made.

A writer of the seventh century A. D. advocated its use in a form of ophthalmia of children, due to deranged liver, for which it is still employed.

Externally it is employed in the treatment of indolent ulcers, carious teeth, ulceration of the throat (blown in through a bamboo tube), and in hæmorrhoids.

Cows' stomachs are employed for most of the complaints named above. The viscus is to be minced and boiled in 10 bowls of water, with ginger and vinegar, down to one bowl. In taking pepsine in this form, the patient must abstain from the flesh and blood of dogs. Pigs' stomachs are used chiefly for dyspepsia and analagous complaints, and also as an anthelmintic. The stomach of the sheep is used as a tonic and stomachic.

REMOVAL OF A RING FROM THE PENIS.—Dr. E. A. Aldridge, in his report from Hoihow, refers to a notion, prevalent probably throughout China, of the existence of a disease the most prominent symptom of which is shrinking of the penis; hence the common name, *so-yang-cheng*—the disease of the contracted penis. It is said most frequently to come on after sexual intercourse, but a man may be attacked by it at any other time. After the penis has once begun to shrink, if proper measures are not promptly taken, the sufferer becomes insensible, and the penis recedes into the belly, and remains there even after death, which soon takes place. The treatment first

to be adopted is to lay hold of the penis and draw it out; this is most frequently done by means of the ordinary Chinese scale-box, the two halves of which are made to act as a pair of tongs or pincers, while the sliding ring round the handle tightens the grip as necessary. The end of the spine is cauterized with artemisia moxa, acupuncture is performed with silver needles, and the penis bathed with hot, strong samshu. There have also been supposed cases of contraction of the female breasts, the disease being known as so-nai-cheng. In the case of a petty native official who, three days previously, felt chilled, and had some pain in the bladder, he thought his penis began to shrink, and as he greatly feared that it might recede into the belly, to prevent its doing so, he put a jade-stone thumb-ring round it, but the next morning was unable to draw off the ring. On examination, Dr. Aldridge found the thumb-ring near the root of the penis; the organ in front of the ring was greatly swollen, being 4¾ inches in circumference, and quite cold; the glans was of a dark color, and the skin tense and shining, and mottled with extravasated blood, showing all the signs of commencing mortification, the constriction having lasted for about 65 hours. After winding tape round the penis, and passing one end under the ring by means of an eyed probe, and then untwisting the tape, he moved the ring forward about 1½ inch, but by so doing considerably increased the swelling in front of the ring. However, after making numerous punctures and letting out some blood and serum, by making steady pressure, in an hour or so the ring was removed; lint spread with zinc ointment was wrapped round the penis, and in a few days it regained its proper form.

Cremation.—The Medical Reports of the Imperial Maritime Customs of China, as published by order of the Inspector-General of Customs, contain much that is curious, interesting and valuable. In No. 25, Dr. A. Henry reports in regard to cremation in Ichang, that sometimes children are cremated. This is only done from superstitious reasons. Where several young children of a family have died in succession, the body of one of them is burned, the supposition being that the ceremony will ensure the survival of the next child that is born to the family. "I witnessed last summer one performance of the kind. The body was simply brought to the open fields in a box, some firewood was piled around it, and set fire to. The absence of odor was remarkable. In the neighborhood, out of the many Buddhist temples around, there is only one the inmates of which are burned after death. The manner in which the process is carried out is both efficient and æsthetic, and, moreover, it is not expensive—at least, the cost does not bear comparison with the large sums that the admirers of the practice in Europe are reported to incur. In the grounds of the temple there is a small dome-like edifice, the interior of which communicates with the open air by a small door. On a stone seat inside the dome the dead friend is placed in a sitting posture, and around him is piled a quantity of charcoal and firewood. This is set on fire; the door is then shut until combustion is complete. The calcined bones are collected and placed in a jar, which is preserved in one of the niches in an adjoining mortuary chapel. The latter building is also a small dome, and contains great numbers of these mortuary urns."

OBSTETRICS AND GYNÆCOLOGY.

The Diaphoretic Treatment of Puerperal Eclampsia by Hot Baths.—Dr. C. Brens, of Vienna, has returned to this treatment. Last year he reported six cases—the satisfactory treatment of which induced him to give it a further trial and he has since (*Annals de la Societè Medico-Chirurgicalé de Liege*) reported eleven new cases with one death. The patient is put into a bath of 100.4°F, the temperature of which is gradually increased. After remaining in the bath for ½ to ¾ of an hour, the patient is wrapped in warm bedclothing, so as to produce an energetic diaphoresis, at the same time that injections of chloral hydrate are used to produce profound narcosis. The patients are put into the bath while under the influence of the narcotic, and if they awaken they are again brought under its influence. Attempts are made by the ordinary means and without force to shorten labor in the pregnant woman, and massage of the uterus is performed in the bath in the woman who has been delivered.

Four of these cases developed with the commencement of labor; in two the convulsions appeared during the first stage of labor, which was prolonged; one case developed during the stage of expulsion, and four cases the day after delivery. The case of death was in a patient who was syphilitic, and who had already suffered from several attacks before she came under treatment,—she died four days after the cessation of all convulsions, and the autopsy showed the presence of a phlegmon of the pelvis and peritonitis. Of the children, two were dead and were extracted by craniotomy, five were delivered by the forceps and survived—the remaining four were living, and belonged to the cases in which convulsions appeared after delivery.

In a number of cases of pregnancy where œdema was present with albuminuria, the prophylactic treatment of hot baths was used and in none was there premature delivery or any other disagreeable effects observed; particularly was it noted that in none of these cases did eclampsia occur. Among other cases one is given of a primipara aged 26 years, in the eighth lunar month of her pregnancy, who was markedly œdematous and whose urine was loaded with blood and albumen. She took forty-five baths, with marked relief to her condition and delivery at term of a healthy child; no bad after effects. In those cases where the convulsions set in after delivery there was no hæmorrhage—the uterus being subjected to massage as was noted.—*Journal des Sages Femmes.*

It has been announced that a baronetcy is to be conferred upon Professor Lister. This is a well-deserved honor, for no one has done more to advance our knowledge in the department of antiseptic surgery. His own original research, and important scientific work, make him deserving of the honor.

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SIGNING THE CONSTITUTION, BY-LAWS, AND CODE OF ETHICS OF THE AMERICAN MEDICAL ASSOCIATION.—Perhaps no one act connected with the doings of the American Medical Association has heen more misrepresented, and consequently misunderstood, both by individuals and a large part of the medical press, than that which consisted in the insertion in the blank forms provided by the Permanent Secretary or the Registration Committee at the recent meeting in Cleveland, of a line by which the signer of the blank thereby endorsed the constitution and Code of Ethics of the Association. By some it was regarded as a mere trick, by which to gain fresh endorsement of the National Code of Ethics. By those who had any leaning toward the so-called New York Code, it was indignantly denounced as having been inserted without authority; while the newspaper reporters, and a large majority of the members of the profession present, readily assumed that the new line in the blank to be filled and signed had been placed there for the express purpose of shutting out all the much talked-of New York new code men. And for months afterward editors of many of the medical journals awarded to some one great credit for having devised a scheme so ingenious and effectual for accomplishing the last named object. It seems almost cruel sometimes to spoil oft-told tales, or to correct misrepresentations by which those making them fondly hoped to further their own ends. But a due regard for truth and the facts of history require us to do it in this case.

It is within our personal knowledge that the origin of the plan to make the signing of the blank provided for delegates and members to fill up and sign, as a prerequisite to being registered at each annual meeting, equivalent to signing the constitution, by-laws and Code of Ethics, had no reference whatever to the followers of the New York code, or to the exclusion of any person or party from membership in the Association. On the contrary, during the meeting at St. Paul, in 1882, while the Judicial Council was engaged in the investigation of charges of unprofessional conduct preferred against a member from a town in the northern part of Wisconsin, it appeared from the direct testimony of the defendant himself, that he had never signed the Constitution or plan of organization of the Association or endorsed the Code of Ethics, concerning the provisions of which he appeared to be quite ignorant. This caused a discussion in the Council in regard to the propriety or practicability of admitting parties to membership in the Association without their signing, or in some way pledging themselves to obey its fundamental laws. More especially so, when the last clause of the second section of the constitution, relating to members, provides as follows:

"Every member elect, prior to the permanent organization of the annual meeting, or before voting on any question after the meeting has been organized, must exhibit his credentials to the proper committee, *and sign these regulations*, inscribing his name and address in full, specifying in what capacity he attends, and, if a delegate, the title of the institution from which he has received his appointment." That the words, "these regulations," here include the Code of Ethics, as well as the constitution and by-laws, is evident from the *proviso* in the fourth paragraph of the same section of the constitution, and the ninth by-law. As a result of the discussion, the Permanent Secretary was invited before the council to explain why so plain and important a provision of the constitution had been, to say the least, but imperfectly complied with? The Secretary informed the Council that in the literal execution of the provision of the constitution in question, during all the earlier years of the Association, a large book was provided in which each member was required to sign directly the regulations constituting the plan of organization of the Association. But as the membership increased, the names were often duplicated, the size of the book became very cumbersome, and the time required for each to sign retarded the progress of registration. For these reasons the book for signatures had been omitted for several years past, and blank forms provided convenient for each applicant for registration, to fill up and sign, containing all the

items specified in the paragraph of the constitution quoted above, except that relating to the constitution, etc. This he claimed had been inadvertently omitted. Some members of the Council were disposed to insist that a book should again be provided, and the provisions of the constitution be literally complied with according to the original method. But after a further explanation by the Secretary to the effect that the *forms* filled up and signed by the present method were all filed, and from them the list of names of members compiled for publication, and that a line could be readily inserted which would cause the signer to directly endorse the constitution, by-laws and ethics of the Association as effectually as if he had entered his name in a book, it was agreed that at the next and all subsequent annual meetings the blank forms provided for members to fill and sign, preliminary to registration, should contain such provision as just stated. It was in compliance with this understanding between the Judicial Council and the Permanent Secretary at the meeting in 1882, that the new clause in the blank forms provided for members to sign before being registered, made its appearance at the meeting in Cleveland in 1883. It was a simple device for complying with an important provision of the constitution without delaying the progress of the registration of members at the commencement of each annual meeting, and having no more reference to the shutting of the door of the Association in the face of any one who was entitled to enter, than it had to the exclusion of the followers of Mahomet. And we trust the Secretary, in conjunction with the Committee of Arrangements, will see that the same object is fully and fairly accomplished at the coming meeting in Washington. The Association has never questioned the right of any member to propose and advocate such changes in the constitution, by-laws and Code of Ethics as he might deem proper, in the manner provided for by the plan of organization.

On the contrary, changes have been proposed by members almost every year, especially in the by-laws. And several important changes have been made at different times both in the constitution and by-laws. Ten years since, a committee was charged with the duty of examining and reporting on a revision of the Code of Ethics, and only three years since an important amendment or addition was made to the Code after full discussion in general session of the Association.

Consequently, all the allegations and inuendoes of open enemies or pretended friends about the gagging of members, the "evasion of issues," or the suppression of discussions, are without the least shadow of foundation in fact. Under the rules of the Association, any member can propose an amendment to any part of the fundamental regulations of the organization. It must be received, published in the minutes of the meeting, and lie over one year for consideration and information of members generally. At the next annual meeting it comes up in regular order for consideration, discussion, and final action.

We say again, therefore, that the Association has never placed the slightest restriction upon the right of any member to advocate any change in either constitution, by-laws or Code of Ethics in the manner provided for in the plan of organization. But it is quite a different thing, when a person seeking to gain or retain membership, openly unites with outside organizations in repudiating a part of the fundamental laws of the Association, and pledges obedience to others in conflict with them. Such an one assumes a position not regarded as enviable, to say the least, by intelligent and honorable men.

A Chicago Medical Library.—The Chicago Medical Society has recently completed arrangements with the authorities of the Chicago Public Library to have a regular department for medical books, to be cared for, and rendered accessible for use, under the same regulations and officers as the rest of the public library. The Medical Society appropriated $500 of the surplus in its treasury for the purpose of purchasing the first installment of books for this library. We say first installment, although soon after the great fire of this city in 1871, the Chicago Medical College, Medical Department of the Northwestern University, having accumulated a library of seven or eight hundred volumes, without a convenient library room in which to keep it safely, had the books transferred to the Public Library of the city, where they have since remained, and will constitute a part of this new collection of medical books. The present arrangement with the authorities of the Public Library, opens at once to the medical profession a valuable medical library and convenient reading-room, at the least possible cost. We trust it will be a well sustained and patronized department of one of the most important public institutions of this city.

Editorial Change.—The *Weekly Medical Review*, published simultaneously in Chicago and St. Louis, and having a corps of editors in each city, has recently changed its leading editor in the first named city. Dr. Robert Tilly, 125 State street, Chicago,

takes the place previously occupied by Dr. Roswell Park, who has removed to Buffalo, New York, and become a member of the Faculty of the Buffalo Medical College. Dr. Tilly is one of our most gifted and enterprising young members of the profession, and will discharge whatever duties he undertakes with fidelity and ability.

OFFICERS OF THE AMERICAN MEDICAL ASSOCIATION.—In the JOURNAL of last week, the list of officers given on the last page of reading matter, was copied from the record of proceedings ot the meeting at which the officers were elected.

The office of Secretary being permanent, the name of Dr. Atkinson does not appear on the record, and its absence was not discovered until too late to supply the defect in that number. It will be found in its proper place in the list in this and future issues.

CORRECTION.—In the list of names of members of the American Medical Association, who were in attendance on the meeting in Cleveland in June last, as published in the last number of the first volume of this journal, appears the name of O. W. Meeks, of Marion, Ohio, which should have been O. W. Weeks, M.D.

SOCIETY PROCEEDINGS.

OBSTETRICAL SOCIETY OF PHILADELPHIA.

Stated meeting Thursday, January 3, 1884. The President, R. A. Cleemaun, M.D., in the chair.

BATTEY'S OPERATION.

Dr. E. E. Montgomery corrected a statement made in the report of the case of ovariotomy narrated by him at the meeting of December 6, 1883. Silk ligatures, not catgut, were used to tie the pedicles.

The convalescence of the patient had been very satisfactory. The temperature did not rise above 99° F. In performing this operation no antiseptic was used; all instruments, sponges, etc., were washed in boiling water, and boiled water was used in washing the wound and abdominal cavity. The mental condition of the patient was such that she was kept constantly under mechanical restraint, and on one occasion, when she had been left alone for a few minutes, she tore all the dressings off of the wound, and at the next visit it was found bare, but no bad result followed. The sutures were removed on the eighth day. Some pain in the lower part of the abdomen and slight fever commenced on the twenty-fifth day, but she has since again improved. Her mental condition is at the present better than it had been for a year before the operation, and she can now converse rationally.

SEPTICÆMIA AFTER ABORTION.

Dr. W. H. Parrish reported the following case: A young woman, 20 years of age, came into the Philadelphia Hospital in the finishing stages of an abortion, which had been coming on for some days. The cause was unknown, but was probably instrumental. At the time I first saw her, three days after her admission, her temperature was 103° to 104° F., and pulse 150. She had had a chill before admission; her abdomen was distended and tender, and the uterus was very sensitive. The right parotid gland was swelled and painful; it continued to enlarge, and fearing septicæmia, he gave fifty grains of quinine daily by rectum, as the stomach was too irritable to retain it. One ounce of whisky was given by the mouth every hour, day and night. A small quantity of morphia was given, to relieve the abdominal tenderness. The pulse and temperature fell rapidly, but the gland continued to be swelled and painful; it was quite hard, but was discolored. There were no chills now, but fearing the presence of pus, he made an opening by Hilton's method, incising the skin and using a director to tear an opening through the gland tissue. This opening was enlarged by passing a pair of forceps, closed, along the groove of the director, and withdrawing them opened. This opening gave exit to two or three fluid-drams of pus. The gland now improved in appearance, but another abscess opened behind the gland and discharged freely. The two abscesses did not communicate. The patient is now convalescent.

OFFICERS OF THE SOCIETY FOR 1884.

President—Richard A. Cleemaun, M.D. Vice Presidents—B. F. Baer, M.D.; W. T. Taylor, M.D. Secretary—W. H. H. Githens, M.D. Treasurer—Alfred Whelen, M.D. Librarian and Curator—T. Hewson Bradford, M.D. Councillors—R. P. Harris, M.D.; Lewis D. Harlow, M.D.; Wm. Goodell, M.D.; T. M. Drysdale, M.D. Publication Committee—John H. Packard, M.D.; James V. Ingham, M.D.; Elliott Richardson, M.D.; B. F. Baer, M.D.

PHILADELPHIA HOSPITAL FOR SKIN DISEASES, 923 LOCUST ST., PHILADELPHIA.—The bathing facilities of this establishment having been greatly enlarged and perfected, are now open and ready for patients sent there by the medical profession. They are under the supervision of an experienced balneologist, and are for such persons only as are sent by their medical attendants with instructions of what form of bath they are to receive. They are intended to fill the place of the many unscientific bathing institutions where patients are often promiscuously steamed, overheated, or unduly chilled, and more harm done by them than good accomplished.

A bathing establishment thus conducted is a great convenience in any city.

BOOK REVIEWS.

TRANSACTIONS OF THE MEDICAL SOCIETY OF NEW JERSEY. 1883. 8vo.

This is an admirably printed volume of 398 pages, containing the minutes of the meeting, addresses, essays, and reports of the district societies. In the minutes we find that:

"Dr. E. M. Hunt introduced the following:

"WHEREAS, The American Medical Association has, at its late meeting, made new requisitions of delegates before their names were allowed to be enrolled;

"*Resolved*, That in nominating delegates to that body, the nominating committee be requested to confer with our Committee on Ethics, and, if they think necessary, with this Society, as to the propriety of this course, and what action needs to be taken in reference thereto.

"After considerable discussion, the vote on the motion on the adoption of the resolution was taken by the raising of hands, with the following result: Ten in favor and thirty-two against. The motion was declared lost."

The Committee on the Curriculum of Medical Study made an important report, but there is no record on the minutes as to how it was received. It was recommended that a board of examiners be appointed, to pass upon the credentials of all persons contemplating the study of medicine in the State, and to examine such persons as fail to present a diploma from some respectable college or university, or a certificate of a completed course in a reputable academy or high school where certain (specified) branches are taught. That this be done by the State Medical Society, and that it require the district medical societies to make it a condition of membership that every physician belonging to or coming into them obligate himself to receive no person under his care as a student of medicine without the certificate of the board of examiners. That the medical societies of the several States be requested to actively coöperate, and that the National Medical Association be requested to signify its approval, and to use its influence to secure the general adoption of such measures.

The address by the President, Dr. John W. Snowden, takes for its theme: "The Advances Made in Medicine by Physical Diagnosis." Dr. Joseph Parrish has an essay on "Insanity and Its Problems," and Dr. George Bayles one on "Causes of Melancholia." Dr. Charles J. Kipp writes on "The Management of Cases of Iritis," and Dr. David Warman on "Professional Fees and Professional Honor;" while Dr. Stephen Wickes, in 124 pages, has an exhaustive article on "Sepulture; Its Methods and Requisites." This article forms a book in itself, and is provided with an admirable index. The report of the Standing Committee gives reports from all but two of the district societies, and these reports give the details of much valuable clinical material, to which is added the obituaries of thirteen deceased members.

TRANSACTIONS OF THE MINNESOTA STATE MEDICAL SOCIETY, 1883.—These Transactions come to us with a very satisfactory muslin-backed pasteboard cover—inexpensive, substantial, and quite sufficient for the purpose. If other societies could only be induced to follow this example, some of their volumes of proceedings would more easily find a place on library shelves. Among the valuable and interesting reports, the one on Practical Medicine discusses diphtheria from various standpoints, giving the special features of individual epidemics as elicited by correspondence from different parts of the State, and includes an account of an advanced case of cerebral softening where the patient had become almost a perfect automaton. The report of the Committee on Surgery gives, among other interesting cases, an admirable lithograph, with details of a case of pistol-shot through the stomach and kidney, with recovery. This report also includes two successful cases of ovariotomy. In the report on Medical Education is given the curriculum of the College of Medicine of the University of Minnesota, and we note that one chair teaches astronomy and physiology, which illustrates probably the printer's idea of the teacher's duties, rather than that of the incumbent. Some of us know how it is ourselves, with respect to printers' ideas. The Necrology embraces four obituaries, and the whole report is so full of interesting clinical details that it would be difficult, without consuming too much space, to give a more extended reference to it.

MEDICO-CHIRURGICAL TRANSACTIONS. Published by the Royal Medical and Chirurgical Society of London. Volumes LXV, LXVI.

Few of our Society Transactions can equal these volumes in their printing, binding, illustrations and general execution. They are filled with valuable material from the most prominent medical men of Great Britain, and the coloring of the illustrations is ahead of anything we have yet attempted. To be sure, the membership comprises over 600 names. The articles are comparatively short, but embrace a wide range of subjects. The cases detailed in Vol. LXV have for the most part already appeared in the current medical literature, but are here given more *in extenso*, with pertinent discussion. We find here Jonathan Hutchinson's two cases, with an illustration, of vaccinia gangrenosa and vancilla gangrenosa; John H. Morgan's two cases of congenital macrostoma, with an illustration; H. Langley Browne's successful case of simultaneous ligature of the carotid and subclavian arteries for innominate aneurism; Spencer Wells' complete excision of the gravid uterus at the sixth month, with epithelioma of the cervix; Reginald Harrison's enucleation of a tumor of the prostate; Berkeley Hill's removal of a fibrous polypus of the bladder, and three cases of tumor arising from skin-glands in the dog, by Dr. Charles Creighton. T. M. Girdlestone recommends highly the long, even tendon from the tail of the kangaroo as having all the valuable properties of the catgut ligature, without any of the defects. Francis Henry Champneys has a third communication on artificial respiration in

still-born children. Dr. Angel Money discusses the great frequency of cardiac murmurs in the puerperal state. Henry Morris has two cases of unreduced and two cases of reduced dislocation of the hip. Dr. Samuel Fenwick discusses the variations in the amount of sulpho-cyanide of potassium in the saliva of persons affected with different diseases. Thomas Bryant reports a successful case of lumbar colectomy. Sir Henry Thompson gives a case of successful removal of tumor of the bladder. Timothy Holmes discusses wounds of the theca vertebralis. Dr. Felix Lemon has two cases of laryngeal growths successfully removed by galvano-caustic operations. Timothy Holmes discusses thyrotomy, and Dr. Sidney Ringer and Dr. Harrington Lainsbury have a lengthy article, with graphic tracings, illustrating the action of the salts of potash, soda and ammonia, on the frog's heart. Sir James Paget gives 7 additional cases of osteitis deformans, and J. N. C. Davies-Colley gives the notes of two cases of malignant pustule, with an admirable illustration of the character of the pustule *in situ*, and its microscopical appearances. This closes the volume.

Volume LXVI contains, in order, the address of John Marshall, as the President, who limits himself to a full and interesting reference to the lives and work of deceased members, which includes, among others, such names as Sir Thomas Watson, our own J. W. Draper, and Charles Darwin. Mr. Richard Barwell has an article on "Dislocation of the Foot with Version and Torsion of the Astragalus;" Mr. Frederick Treves on "Resection of Portions of the Intestine;" Mr. Christopher Heath gives "A Case of Aneurism of the External Carotid Artery," and Mr. Howard Marsh one of "Aneurism of the Arch of the Aorta," with admirable illustrations. Dr. Francis Warner details a case of ophthalmoplegia externa complicating Graves' Disease. Dr. Vasy Lyle describes the endemic hæmaturia of the south-east coast of Africa, agreeing with the other authorities that it is due to the presence of the bilharzia hæmatotrium, but can throw no light upon the manner in which it is introduced into the system—impure water seems to be the most probable source. Dr. Percy Kidd contributes to the "Pathology of Diphtheritic Paralysis." Mr. Alfred Willett and Mr. W. J. Walsham give "A Second Case of Malformation of the Left Shoulder Girdle"—this malformation consisting of a triangular bridge of bone stretching between the spinal column and the scapula, and an abnormal development of the supra-scapular epiphysis, being homologous to the supra-scapular bone of some of the lower vertebrata. The movements of the scapula were restricted, but not prevented, by a hinge at the junction of the scapula and the bridge of bone. It was removed by an operation which resulted in a greatly increased freedom of motion on the part of the scapula. Dr. Thomas Barlow discusses cases described as "Acute Rickets" as probably a combination of scurvy and rickets, the scurvy being an essential, and the rickets a variable element. Mr. Herbert W. Page gives a case of subperiosteal hæmorrhage (probably scorbutic) of three long bones in a rickety infant, and Mr. Arthur E. J. Barker a case of cavernous nævus of the rectum proving fatal in an adult from hæmorrhage. A lengthy and valuable paper by Dr. Samuel West gives a case of purulent pericarditis treated by paracentesis and by free incision, with recovery, which is followed by the statistics of paracentesis pericardii. Dr. Angel Money places on record two cases of gliomatous enlargement of the pons varolii in children. Sir Spencer Wells details a case of excision of an enlarged cancerous kidney; Mr. John Marshall a case of suppurating traumatic hæmatoma connected with the left kidney, and treated by puncture and antiseptic drainage. Mr. Thomas Colcott Fox discusses urticaria pigmentosa, or xanthelasmoidea, and Sir Henry Thompson gives twelve cases of tumor of the bladder. Dr. George Thin, on the bacillus of leprosy, tells us of his investigations in specimens of leprous tissue in three cases from China, and one from the West Indies. The specimens were removed from the living patients, and immediately placed in alcohol. The bacilli were stained as in tubercle bacilli, and were found in the leprous infiltrated skin—none in the sound skin. In one section bacilli were found in the epidermis, in cells which Dr. Thin believes to be white blood corpuscles. In another the bacilli were found in two lymph corpuscles lying in the lumen of a lymphatic vessel. These facts give rise to a theory on his part, that the lymph corpuscles are one of the media by which the bacilli are carried from one part of the body to another. Mr. Seymour J. Sharkey gives a very interesting case of asymmetry of the brain, where the left hemisphere was generally smaller than the right, this inequality being due to the reduced size of the individual convolutions, with the exception that the angular and superior temporo-sphenoidal convolutions were absent. Accompanying this was a marked diminution in size of the right arm and leg, the right arm being rigid. The patient, who died at 25 years of age, from her birth had been left-handed and a little lame, but there was no peculiarity in her eyes or speech. The corpora quadrigemina were well developed, and equal on both sides. The left optic tract was very much smaller than the right, but the right optic nerve was but slightly smaller than the left.

ELEMENTS OF SURGICAL PATHOLOGY. By AUGUSTUS J. PEPPER, M.S., M.B., London; F.R.C.S. Eng.; Fellow Univ. Coll., London; Surgeon to St. Mary's Hospital, Teacher Practical and Operative Surgery at the Medical School. H. C. Lea's Son & Co, Philadelphia, Pa. Pp. 503. Eighty-one Engravings. (From Jansen, McClurg & Co., Chicago, Ill.).

This is one of the series of small volumes for elementary study issued under the title of Manuals for Students of Medicine. It is similar in form to the volume on Applied Anatomy mentioned recently (p. 734) in these columns. These little books fill a gap in medical literature between the bulky systematic treatises on the one hand, and the worthless and trashy *vade mecums* and compends on the other.

Cui bono? asks a critic in a recent number of the *Physician and Surgeon*, since these books contain

nothing which cannot be found in the standard authorities. The answer is simple. Medical college training, like all other instruction, must be made more systematic and special, and around it must grow up a specialized literature adapted to graded teaching. The present volume, beside being a most excellent introduction to any amount of pathological research, is in itself sufficiently complete to prepare a candidate for his final examinations. Its classifications are full and clear, as well as brief. The use of flat-face type in the headings to paragraphs relieves the eye and aids quick reference. These little handbooks are bound in "limp" red covers, are in size about four by six inches, and are altogether tasteful and attractive in appearance. E. W. A.

TRANSACTIONS OF THE AMERICAN GYNÆCOLOGICAL SOCIETY. Vol. 7. For the Year 1882. Philadelphia: Henry C. Lea's Sons & Co. 1883.

Volume 7 of the society's Transactions contains a valuable list of essays and discussions by specialists in the diseases of women, in addition to which is furnished a complete Index to the gynæcological literature of all countries for the year 1881, prepared with the coöperation of Dr. J. S. Billings, U. S. A., in charge of the National Medical Library in Washington.

A list of the contributors to this volume will furnish the best criterion to its value. These are: Thomas Addis Emmett, M.D.; Joseph Tabor Johnson, M.D.; Thomas M. Drysdale, A.M., M.D.; R. Stansbury Sutton, M.D.; Fordyce Barker, M.D., LL.D.; Theophilus Parvin, M.D.; J. Knowsley Thornton, M B.C.N.; Henry J. Garrigues, A.M., M.D.; T. Gaillard Thomas, M.D.; Samuel C. Bussey, M.D.; Ely Van De Warker, M.D.; J. Collins Warren, M D.; William L. Richardson, M.D.; Matthew D. Mann, M.D.; W. H. Baker, M.D. Dr. Thomas' name appears a second time as the writer of a memoir of the late Prof. James Platt White, of Buffalo. E. W. A.

DOMESTIC CORRESPONDENCE.

DAVENPORT, IOWA, December 1, 1883.

EDITOR OF THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION.

Your editorial on medical advertising, in which you take kindly pains in expressing your views on the pressing question of private institutions for the treatment of diseases, and the "necessity and propriety of such proper advertising as will make known their existence to the profession and the public," meets with my hearty second, and I believe, as you say, that the time has come when the subject should receive the earnest attention of both State and National medical organizations.

There is no doubt that all classes of ailments can be better handled and better results attained under the direct supervision of the doctor in hospitals, than when they are surrounded by so many influences that do not belong to the disease itself or the concomitants of the same.

Where patients are taken to health resorts, home, retreat, infirmary, sanitarium, or even prison, let the disease be constipation, fever, insanity, opium habit, ophthalmia, dyspepsia, or kleptomania, and put under direct charge of the surgeon or disciplinarian, the failure of proper results can be attributed more definitely to the correct cause. The basis of statistics is better defined, and therefore, in skillful and honest hands, the attainment and the standard of the profession will be raised.

Now, to make any distinction of any class as requiring special provisions, and open the gate to the specialist of any particular class, is not "the maintenance of the professional character as applicable to all," and will "invest him with a special advantage inconsistent with the equality of rights and duties pertaining to the profession." Then why be a judge as to whether one class should have special latitude or provision? That should be left to the man who has most studied the requirements of his specialty, and not dictated by the practitioner of other branches. This latitude belongs to him as much as the way he prefers to administer his medicines.

Provision, with its limitations, should be made for all by underlying principles.

The keynote to undignified advertisement is *brag*. The advertisement of special qualifications, present or former position, special attainments, peculiar advantages, extensive travels, unprecedented relationships, etc., etc., are all undignified, out of taste, and justly reprehensible.

The simple announcement of his business and the place for its transaction, when truthfully told, however, does not seem to me to be beneath the dignity of any calling in the world.

The ethics of proper advertising can on this basis be definitely prescribed; a declaration of its limits can be as definitely determined, as the present Code specifies its boundaries.

If "both public and private institutions for the accommodation" of invalids can be instituted, and they can be advertised to "the profession and the public without in the slightest degree violating any principle of ethics" the profession generally don't know how, and we would like very much to be informed, for many suffer from this misunderstanding.

Were the profession allowed to found private institutions and given the latitude in advertising of a first-class college, there would be many institutions of creditable pretensions in the hands of the regular, instead of the blatant quack. Their advantages in this respect over us in the sanitary conditions of their practice, and the extension of the field of operation, renders them close competitors in the number of cures made.

The restrictions in the manner of making oneself known, and the methods adopted under it, are such that the only way to become "eminent" in the profession is to start a college or free clinic, and thus propound to another community the enigma of free service. Does not such a proposition generally nauseate rather than appetize, and is it ever accepted as "explained away" by the projector?

As to the announcement of limitation of office

hours or special practice, I cannot see that this act either announces to the public that he is more physically able for practice the whole day, or that he is a more proficient practitioner of medicine; if anything, it would acknowledge a bodily weakness and a necessity of restricting his work, or an inability to maintain more than a part of general practice.

I agree that his announcing that he is an oculist, gynæcologist, dentist, etc., smacks of a short cut to his specialty, and it is by far the strongest presentation, to indicate that he is a member of general medicine and still belongs to it, but as to his announcing a superiority by thus designating his business, it can only be by inference at best.

I offer these thoughts as one interested in the determination of the true relation of the profession to the public, and one who labors within the pales to sustain the dignity of our calling to the best of his ability.

With respect, I am yours, E. H. H.

FOREIGN CORRESPONDENCE.

LONDON, December, 1883.

At the last meeting of the Cambridge Medical Society, a recent specimen was shown of union by bone in fracture of the ——— capsular neck of the femur. Professor Humphry pointed out that in all cases of fracture of the neck the portion adhering to the head became absorbed, and the head became united immediately to the shaft behind the trochanters He showed several examples taken from the pathological museum. He maintained that many such examples were looked upon as cases of impacted fracture, an accident he thought impossible.

An unique structure has been erected by the Metropolitan Asylum's Board for the reception and isolation of patients suffering from infectious fevers on plans which mark a distinct departure from old ideas. The diseases admitted include not alone cases of typhus, typhoid or scarlet fever, but measles, diphtheria and small-pox. Personal inquiry having been made by the architect to the local Government Board, and visits made to the hospitals in Berlin, Heidelberg, Dresden, Paris and other cities, a pavilion containing small wards and isolation rooms has been erected adjacent to the London Fever Hospital. As yet, owing to want of funds, only three rooms have been completed, but when finished the structure will consist of twelve ward-rooms, and two nurses' or administrative rooms. Externally, the pavilion presents a bright and cheery aspect—a sort of Swiss cottage. Within, everything is spotlessly clean, glazed, highly polished and without corners. Germs will be unable to find lodgment, and the accumulation of dirt an impossibility. Where the walls join the flooring or the ceiling, or form a junction with each other, instead of the angle common in all houses, a curve is made of special concave bricks. Moreover, the walls being of glazed brickwork of different and pleasantly harmonized colors, they can be easily washed and disinfected.

Again, the whole of the doors and window frames present no ledge or crevice, all the woodwork being rounded and curved, and capable of being cleaned without the least difficulty. The flooring is constructed of concrete in a framework of iron joists, and covered with oak blocks—the combination, when thoroughly bees-waxed and polished, creates a floor which has the advantage of extreme solidity and imperviousness. By a very simple but ingenious contrivance, merely that of having deeper framework than ordinarily at the sill, each window can be kept open at the central meeting bars for the admission of fresh air. The fanlights at the upper part of the windows are skilfully contrived to fall inwards when required, and to preserve uniformity of temperature; the glazing throughout the building is of stout sheet glass, in two thicknesses, with an interspace of three-quarters of an inch. Altogether the patients will have from 150 to 180 square feet of floor space and about 2,000 cubic feet each; their wards will be heated by ventilating grates having inlet flues which will allow of a constant passage of warmed fresh air. Of the many novel features, the pavilion stands clear of the ground, and on a series of strong brick arches that rest on a square basement of concrete, the earth around which is sloped away. Dampness is thus obviated; the admission by the floor ventilators of bad air is avoided; there is a constant circulation of good air beneath and around the entire structure, and there is none of the mischief arising from the comparatively stagnant angle formed by the junction of the surface soil with the main walls. In short, the committee have obtained a building in which dank sweats are impossible, where fresh air finds ready welcome, and from which foul air is promptly and effectively expelled.

Lately there have been several cases of false and unfounded charges of malpractice brought against members of the profession in the United Kingdom. A testimonial has been started in order to recoup Messrs. Bower and Keates, who had an action for damages brought against them by the father of a child who died after having tracheotomy performed for diphtheria. The father was told the only chance to save the child's life was to suck the tube, which had become blocked. He did so; the patient lived two days after the operation. The parent alleged he also suffered from diphtheria, and the nature of the disease his child suffered from was not explained to him. The evidence did not prove the man really suffered from anything more than an ordinary sore throat, and the verdict was given for the defendants. It is now proposed that a fund should be raised by the profession for the defense of members against whom charges may be brought.

The recent discussion about the weight of Turgienieff's brain has led to the publication of an article on the subject of the weight of brains by a Russian scientist, M. Nikiloroff, in the *Novosti*. According to him the weight of the brain has no influence whatever on the mental faculties. The average weight of a man's brain is, according to Luschka, 1.434 grammes, of a woman's, 1.272 grammes. The maximum weight is said to be 1.600 grammes, and the minimum 800 grammes. The brain of the celebrated mineralogist, Haussmann, weighed 1.206 grammes. It ought to be remembered that the sig-

nificance of the weight of the brain should depend upon the proportion it bears to the dimensions of the whole body and to the age of the individual. Byron died at the age of thirty-six, and the great geometrician Gauss, at seventy-eight years of age; the brains of the two should, therefore, not be compared. It is equally important to know what was the cause of death, for long disease and old age exhaust the brain. To define the real degree of development of the brain, it is, therefore, necessary to have a knowledge of the condition of the whole body, and as this is usually lacking, the mere record of weight possesses little significance.

STATE MEDICINE.

SANITARY REPORT FROM CONNECTICUT.

BY DR. C. W. CHAMBERLAIN, SECRETARY OF STATE BOARD OF HEALTH.

MORTALITY IN SEPTEMBER.

	HARTFORD.	NEW HAVEN.	MERIDEN.	WATERBURY.	NEW BRITAIN.	BRIDGEPORT.	NORWICH.	NEW LONDON.	MIDDLETOWN.	KILLINGLY.
Total deaths	86	86	26	37	23	46	27	19	19	6
Monthly death-rate	20	14	14	18	17	13	13	15	15	10
Zymotics	44	15	10	14	7	11	8	4	5	2
Infantile	32	30	7	5	10	15	12	5	..	1
Nervous diseases	4	14	4	1	2	3	..	..	5	1
Heart diseases	4	4	..	..	..	1	1	..	2	..
Scarlet fever	1	..	2	..	1	..	..	..	..	..
Typhoid fever	3	3	3	9	1	..	3	..	..	1
Typho-malarial fever	..	1	2	..	..	..	..	..	1	..
Malarial fever	1	2	..	..	1	..	..	..	..	..
Diphtheria and croup	32	2	..	1	..	..	..	1	1	..
Measles	..	..	..	..	..	..	..	..	..	..
Whooping cough	1	1	..	..	..	..	1	..	..	..
Infantile diarrhœa	3	6	3	2	4	5	1	..	1	1
Diarrhœa and dysentery	..	..	..	2	..	3	1	..	1	..
Consumption	13	12	3	11	4	9	4	2	3	..
Pneu'ia and acute lung	..	4	..	..	..	1	..	..	..	..
Old age	3	..	..	..	..	..	..	..	..	..
Railroad accidents	1	..	..	..	..	..	..	..	..	..
Accident and violence	3	6	4	1	1	4	..	1	..	..
In public institutions	8	6	..	..	..	..	..	..	6	..

The sanitary history of the month is, on the whole, more favorable than that of the same month in previous years. The death and sickness rate is not large except in a few places where the prevalence of some one form of disease to an unusual degree swells it, and even then there are no generally diffused types nor any that can be strictly called epidemic, except it be malarial diseases in some instances; nor does the rate in any of the cities reach a degree to cause alarm. The decrease in diarrhœal diseases partially accounts for this, as the table shows a decrease of nearly half from 1882, or 60 in place of 33 this year. This indicates also a corresponding decrease in the number sick—on an average eight cases for each death. In the table two or three classes of diseases only are considered, so that the columns if added do not equal the total number of deaths given. Thus the deaths from the causes given in the first column equal 55, the deaths in the month 86, the difference, 31, indidates the deaths from other causes not enumerated, as cancer, Bright's disease and the whole list not included in our discussion. The month is treated as if it were a year, so that the rate of September in 1883 is compared with that of September of previous years. The only trouble is in the February of leap-year, which is one day longer than other Februarys.

The prevalence of diphtheria in Hartford shows increase during the month, since then it waned, and now is prevalent as ever, *i. e.*, at the date of this writing. The mortality was 10 in June, 20 in July, 28 in August, and 32 in September—90 in all. So far, defective local plumbing, and especially unventilated drainage pipes in the house, and the use of cesspools and privy vaults in unclean by-streets and localities, still seem to be the principal contributing agencies. That it is a filth disease is shown by repeated instances. In one case where several members of one family died from this cause, the sink pipe had discharged into the cellar for a long time, creating a putrescent mass and saturating the soil where no sun nor air could reach it. Unfortunately, the cause was not discovered until the mother and all her children had perished. Similar instances are reported often, and greater care is the result among the thoughtful and wise. In looking up the surroundings where several members of a family have died from diphtheria, and scarlet fever as well, I have again and again found similar conditions. Oftener, however, the sink drainage percolates through the cellar wall or runs down half outside it and half inside. One would not suppose that privy vaults used by a whole family would be tolerated in a corner of the cellar, yet I have several times found such a state of affairs where there had been repeated deaths from filth diseases in families that have successively occupied a house. The outbreak of diphtheria or scarlet fever where local conditions have been suspected, is a strong proof of their unsanitary condition.

The increase in the prevalence of typhoid fever is seen forcibly when the mortality is compared with that from malarial fevers. Thus, in the present year the deaths in the cities reported are, from typhoid fever 23, all varieties of malarial, 8; in 1882, typhoid fever 21, malarial 23; in 1881, typhoid 7, malarial 18 (this is for September). The decrease in the mortality from malarial fever is quite regular. It is true that the total from typhoid is increased by its prevalence in Waterbury; but in quite a large area the reports show a similar increase of typhoid and decrease of malarial fevers. In Waterbury malarial diseases never have been the governing type, as far as I can learn. The amount of typhoid fever in Waterbury has, as is usually the case, been exaggerated. The dry weather, low water, and soil upheaval for sewers are all the factors yet charged. Perhaps there is some general influence whose laws we do not yet know that should be added to these.

The outbreak of scarlet fever in South Manchester and the unusual prevalence of diarrhœal diseases in children and adults in comparison with the rest of the State, are corroborative of the statements last month relative to the areas of sewage deposit and decaying organic matters exposed by the unusually dry season,

The scarlet fever in Hartford is adjacent to the cases of diphtheria, as far as I can learn.

Diphtheria is reported from New Hartford—several cases in one family—with a tendency to invade the larynx. Typho-malarial fever is reported from several towns near Manchester, and several cases also from Manchester by Dr. Griswold, who relates a case of suicide by the use of some salt of cobalt, not a usual agent for this purpose. A few cases of diphtheria are reported from Pleasant Valley, also Riverton, Avon and Suffield—one fatal in the latter place. In Winsted it is stated to be somewhat common. Scarlet fever is reported as prevalent to some extent in New Canaan, and to have appeared in Avon, in addition to the places already mentioned, Measles are not so common; from Hampton and New Canaan mention is made of the presence of the disease. Westport has, in addition tosome malarial cases, a few of whooping-cough and tonsillitis.

From Cheshire several deaths are reported from typho-malarial fever; malarial and typhoid fevers are reported from Plainfield, but less of the latter than usual. This is one of the towns recently invaded (comparatively) by malaria. Also from Avon; Suffield, where the number is the same, but one case of typhoid was fatal; New Canaan the same, but no typho-malarial, of which there was one case in Suffield; a sudden death on the road from heart disease occurred in Hampton and a machinery accident in Saugatuck.

An unusually healthy month is reported from Haddam, Greenwich and Oxford, with little disease except malarial, and also from Plainville and Willington. Several cases of lung fever are reported in one or two places—more than is common for this season.

HEALTH IN MICHIGAN.

Reports to the State Board of Health, Lansing, by observers of diseases in different parts of the State, show the principal diseases which caused most sickness in Michigan, during the week ending December 8, 1883, as follows:

NUMBER OF OBSERVERS HEARD FROM, 41.		For preceding week.
DISEASES ARRANGED IN ORDER OF GREATEST AREA OF PREVALENCE.	Per cent. of observers who reported the disease present.	Per cent. of observers who reported the disease present.
Rheumatism	71	61
Intermittent fever	66	55
Neuralgia	63	66
Influenza	49	41
Tonsilitis	46	50
Bronchitis	46	61
Consumption, of lungs	46	52
Remittent fever	34	36
Pneumonia	32	30
Diarrhœa	27	30
Inflammation of kidneys	24	25
Whooping-cough	22	18
Erysipelas	28	30
Scarlet fever	20	23
Measles	15	16
Typhu-malarial fever	15	18
Typhoid fever (enteric)	15	11
Diphtheria	15	23
Inflammation of bowels	15	18
Dysentery	11	7
Puerperal fever	7	9
Inflammation of brain	5	5

For the week ending December 8, 1883, the reports indicate that intermittent fever, rheumatism and influenza increased, and that bronchitis, erysipelas and diphtheria decreased in area of prevalence.

At the State Capitol, the prevailing winds, during the week ending December 8, were southwest; and, compared with the preceding week, the temperature was slightly lower, the absolute and relative humidity and the night ozone slightly more, and the day ozone the same.

Including reports by regular observers and by others, diphtheria was reported present during the week ending December 8, and since, at fifteen places, namely: Antwerp, Big Rapids, Detroit, Leslie, Mattawan, Manistee, Monroe, Niles, Novi, Pierson, Pontiac, Port Huron, Riley Center, Six Lakes, Ypsilanti. Scarlet fever, at twenty-three places: Adrian, Battle Creek, Clifford, Detroit, Ensley, Ironton, Kalamazoo, Manistee, Monroe, Maple Valley, Medina, Memphis, North Shade, Newport, Owosso, Oxford, Pontiac, Port Huron, Plymouth, Reynolds, Roxand, Salem, Winfield. Measles at nine places: Alpena, Brooklyn, Clinton, Cedar Springs, Charlevoix, Eagle, Gaines, Monroe, Richmond.

HENRY B. BAKER, Secretary.

Lansing, Dec. 12, 1883.

NECROLOGY.

THAYER, SAMUEL WHITE, A.M. M.D. L.L.D., was born at Namtree, Vt., May 21, 1817; died at Burlington, Vt., Nov. 14, 1882. He was the oldest son of Dr. Samuel White Thayer and Ruth Packard Thayer, formerly of Thetford, Vt. His early life was passed in his native town until 1832, when his parents removed to Thetford for the better advantages of Thetford Academy. Here he fitted for college, intending to take a college course at Dartmouth, but circumstances proving unfavorable, he commenced the study of medicine in his father's office in 1835. His first course of lectures he took at Dartmouth. In 1837 he was elected demonstrator of anatomy at Woodstock, (Vermont Medical College), which position he occupied until 1841. He graduated at the latter institution in 1838, and in 1840 settled for medical practice at Northfield, Vt. He remained here until 1854 in an extensive practice of medicine and surgery, when he removed to Burlington, Vt., partly for the purpose of assisting to sustain the Medical Department of the University Vermont. A medical school had existed here from 1823 to 1836, during which period about 114 students had graduated from it, but finally it closed for want of support. Ever since 1850 Dr. Thayer had been persevering and untiring in efforts to enlist sufficient influence to reorganize the school.

In 1853, with the assistance of President W. Smith, ex-President Wheeler, Prof. Benedict, and others, a corporation was formed, and the following Board of teachers were elected, viz.: Professor of Surgery, S. W. Thayer; Professor of Theory and Practice, Orrin Smith; Professor of Anatomy, Levi Bliss; Professor of Chemistry, Ezra Carr.

Some of these failed to appear, and Dr. Thayer, calling to his aid Dr. Nelson, sustained the college during its first term, delivering the first course of lectures. He was almost alone during its second course of lectures, himself delivering two lectures a day for four months, upon nearly all the branches of medicine, besides attending to a large private practice. As the college grew in favor and made advancement, he made a present to it of a large collection of specimens which he had collected for its museum. He served with energy and ability as Lecturer, Dean, Secretary, etc., in the college until 1872, when he was made Emeritus Professor of Anatomy.

When the war of the Rebellion broke out, he was appointed by Gov. Fairbanks Chairman of the State Board of Medical Examiners; his associates being Dr. E. E. Phelps, of Windsor, and Dr. S. Newell, of St. Johnsbury. He examined every medical officer of Vermont regiments, and many enlisted men. In 1864 he was appointed by Gov. Smith Surgeon General of the State of Vermont. In this new office, which had been created by the Legislature the same year, without material or precedent, he proved himself very efficient, with every arrangement necessary for providing for the sick and wounded, whether in the field or in hospitals at home. He assisted in establishing three military hospitals, at Montpelier, Brattleboro and Burlington, furnished with capable and efficient medical officers. Dr. Thayer also held a commission as Assistant Surgeon, U. S. A., and at the close of the war was breveted Medical Director.

In May, 1870, Dr. Thayer went West to Minnesota and along the line of the Northern Pacific R. R., and organized a medical service for the care of the employes constructing the road, such as has since been adopted by many other roads.

In 1872 he went to the Pacific coast in company with the officials of the N. P. R. R., along its proposed route to its terminus in Oregon. While on this route, he, with his accustomed energy, made a large collection of the woods, grains and grasses native to the region, which he afterwards exhibited at the Vienna exposition, and allowed to remain there by request of the Commissioners. He returned to Burlington in 1873, to his home, and resumed his practice of medicine and surgery.

In 1866 he received an honorary degree of A.M. from Dartmouth College.

In 1877 the University of Vermont conferred upon him the honorary degree of LL.D.

In 1867, or about that time, an accident happened to Dr. Thayer, which threatened his life, and seriously affected his health ever afterwards. In amputating a gangrenous leg he cut or scratched his hand, through which wound, slight as it was, he received poison into his system, septicæmia, from which he never fully recovered, and which had much to do in breaking down his constitution, and thereby inducing the disease that caused his death. Previous to this accident he had shown a fondness for travel, and had in 1855 visited Nova Scotia and other British provinces. In 1867 he made a trip to Europe, spending some months traveling in England, Scotland, Ireland, France, Germany, Switzerland, and Italy.

In 1869 he went, in company with ex-Governor Smith, Rev. Dr. Lord, C. C. Coffin and others, through the wilds of Minnesota, Dakota, and along the route of the Northern Pacific Railroad.

In 1874 he made a second trip to Europe. In 1876 he went to Bermuda, returning via West Indies. He also made a tour through Florida and other Southern States.

In 1878, in company with his long time friend, Col. John L. Merriam, he made a tour around the world, going via San Francisco, Yokohama, and India, and returning through Europe.

In 1882 he made his last long journey, to St. Paul, as delegate to the American Medical Association; from there with his friend, Col. J. L. Merriam, to Montana and to the Yellowstone Park, returning to his home in Burlington in July.

Soon after his return he was attacked with the painful disease which caused his death, gangrene of the foot, senile gangrene. He suffered with great fortitude the most intense agony, attended by skillful medical men, who combined the office of friend with medical adviser.

Dr. S. W. Thayer was a very skillful surgeon, the leading surgeon of the State. His operations include nearly or all of the most difficult which have ever been performed in Vermont. He was, as a general practitioner, a man of good judgment, of rare good sense. He was remarkably unselfish, and generous to a fault. He died universally lamented. The poor, the rich, all classes mourned him as a dear personal friend.

At his burial the entire city did him reverence—flags at half-mast, all places of business closed, all the bells of the city tolled. His bier was covered and his grave was filled with the choicest flowers, all moistened with tears. So departed our dear friend, our beloved physician.

Dr. Thayer was married Jan. 6, 1841, to Sarah Louisa, daughter of the late John A. Pratt, of Windsor, and she, with one son, Dr. Charles P. Thayer, survives him.

O. F. FASSETT, M.D., of Vermont.

ELIOT, JOHNSON, A.M., M.D., P.H.D., one of our best known physicians, was born in the city of Washington, August 24, 1815; died at his residence, 510 E Street, of pneumonia, Dec. 30, 1883.

He was descended from early and distinguished colonial settlers of Massachusetts and Maryland. His father, Samuel Eliot, Jr., of Puritan stock, through the "Apostle to the Indian," and nephew of Andrew Eliot, President of Harvard College, came to Washington shortly after it was selected and laid out as the permanent seat of the United States Government, about the time, or shortly before, Mr. James Greenleaf, Dr. Frederick May, Judge William Cranch, and others from Massachusetts settled here. Samuel Eliot engaged in business, and a few years later married Mary, daughter of Gov. Thomas Johnson, one of the three commissioners for laying out the city of Washington, and ex-Governor of Maryland, the personal friend of General Washington,

and throughout the Revolution one of the most active and influential patriots, who was appointed by President Washington Associate Justice of the Supreme Court of the U. S. in 1791. A first cousin of Mrs. Eliot, Louisa, second daughter of Joshua Johnson, married John Quincy Adams in 1797.

The subject of this notice was educated in the District of Columbia at the McLeod Seminary. Losing his father at 13 years of age, he entered the drug store of Dr. McCormack, and there studied pharmacy. In 1839 he began the study of medicine with Dr. Thomas Sewall, and about the same time received an appointment of steward in the Washington Naval Hospital; but the duties of that position did not interfere with his medical studies. He attended lectures in the Medical Department of Columbia University, where he graduated M.D. in 1842, and immediately after was appointed Demonstrator of Anatomy in that institution.

He opened an office on Seventh street, between G and H, where, by strict attention to his duties, he speedily acquired business.

He became a member of the Medical Society of the District of Columbia in 1843, and the same year joined the Medical Association of the District of Columbia.

He, with Dr. Noble Young, were the originators of the Medical Department of the University of Georgetown. Dr. Eliot was assigned the chair of anatomy, which he filled acceptably until he was, at the request of the Faculty, transferred to the chair of surgery. The latter position he held until he retired from the active duties of teaching, in 1876, accepting the position of emeritus professor of surgery and professor of clinical surgery. While not a fluent speaker, his exact knowledge of anatomy, and the subjects he taught, enabled him always to interest his hearers.

For the last sixteen years of his active connection with the college, he served as Dean of the Faculty.

For many years his practice was extensive and exacting, and early in his professional career he became recognized as one of the leading surgeons of the District. He has performed with success many capital, and some of the most difficult operations in surgery, including that of ovariotomy four times. Dr. Eliot has been for years connected with the management or on the surgical staff of Providence Hospital, Columbia Hospital for Women, and the Children's Hospital, which position he held at the time of his death. He was well read and widely informed on all matters connected with his profession, was careful in diagnosis, dextrous and skillful in operations, attentive and conscientious in the discharge of all his duties as a physician.

Besides his addresses at college openings and commencements, which were published, he contributed some valuable articles to the *American Journal of Medical Science*, and to other medical periodicals, including the "Transactions" of this Society. The following list of his publications, though known to be incomplete, is nevertheless presented:

Valedictory to the graduating class of the Medical Department of Georgetown University. 14 pp. 8vo. 1856.

Address delivered at the eighteenth annual Commencement of the Medical Department of Georgetown University. 12 pp. 8vo.

Address delivered at the twenty-third annual Commencement of the Medical Department of Georgetown University, 11. pp. 8vo. 1872.

Excision of Inferior Maxillary Bone, Left Side. Transactions Medical Society of the District of Columbia, Vol. V, p. 53-54. 1878.

Palato-Pharyngeal Tumor. *Amer. Jour. Med. Science*, Vol. 78, pp. 70-78. Phila. 1879.

Reprint of same. 3 pp. 8vo. 1879.

Successful Ovariotomy. *National Med. Review*, Vol. I, p. 4. 1879.

Dr. Eliot was always an active supporter of medical organizations, and a frequent participant in discussions, and presented various pathological specimens to this society, and read written reports of cases.

Beside the societies named, he was a member of the Pathological Society of Washington, organized in 1843; a member of the Section on Medicine of the "National Institute," which met at the Smithsonian Institution, and at one time sent delegates to the American Medical Association.

As an instance of his fidelity to professional duty and courage under trying circumstances, we will mention a single fact: After one of the severe battles of the late war (I think Chancellorsville), a call was made for volunteer surgeons. Dr. Eliot immediately provided himself with all the appliances necessary for immediate surgical dressings and for surgical operations, repaired to the front, and reported to the officer in command his readiness to serve as surgeon. He was at once assigned to duty. The whole night and next day were spent in most laborious professional work, with no rest and meager refreshments. The operating-room was a deserted house. The doctor worked on, regardless of self, absorbed in his desire to relieve as many of the wounded as possible. He neither knew or thought of the position of the contending armies. Suddenly he was informed that the Rebel cavalry was surrounding the hospital. He still continued his labors, and among those who had received his attention during the night and forenoon were several wounded Confederate soldiers. No parley, however, would be listened to, and Dr. Eliot was marched off a prisoner. He represented the humanity of his science so ably that his case was promptly reported as a non-combatant volunteer surgeon, and he was in a few hours paroled by Stonewall Jackson.

Dr. Eliot joined the American Medical Association in 1858, and attended its meetings in 1865, '67, '68, '70, '73, '74, '75, '76, and 1880.

He has at different times filled most of the offices in the Medical Society of the District of Columbia, including the presidency in 1874. He has also held most of the offices in the Medical Association of the District, and has been a most constant supporter of medical ethics. He was a member and Vice-President at the time of his death of the Alumni Association of Georgetown University. He was professionally connected with the Central Dispensary as consulting surgeon from its organization in 1871.

Dr. Eliot was a uniform and earnest friend of young practitioners, supporting, advising and directing them in their management of difficult cases. He loved his profession, and desired that every member should win and enjoy in it an honorable position.

He was himself the soul of honor, and never intentionally gave offense or took any undue advantage of a brother practitioner. In 1861, '62, '63 and '64 he served as physician to the city small-pox hospital, and in the year 1869 was appointed one of the surgeons to the "Metropolitan Police" of the city, and held the position to the time of his death. For many years he has been consulting surgeon to "St. Ann's Infant Asylum." In 1850 Dr. Eliot was united in marriage to Mary John, daughter of John Llewellyn, Esq., of St. Mary's county, Maryland, who with six children, three sons and three daughters, survive him. His oldest son, John Llewellyn Eliot, studied medicine, and for some years has been in practice with his father. His oldest daughter is married to Dr. Valentine McNally, chief clerk of the Ordnance Department.

A special meeting largely attended was held by the Medical Society of the District of Columbia on the announcement of Dr. Eliot's death, at which many members spoke of the long acquaintance with the deceased, and the great regard for his character. The judgment of the meeting was voiced in a series of resolutions, which were published in the daily papers. The Faculty of the Medical Department of the University of Georgetown held a meeting and passed resolutions of regard for the memory of the old and valued collegian. The "Alumni Association of Georgetown University," also held a meeting and passed resolutions of respect for his memory. The Medical Board of Providence Hospital, the Board of Directors of the "Childrens' Hospital," and the Directors of "Columbia Hospital for Women," each held special meetings and passed appropriate resolutions appreciative of Dr. Eliot's life and labors. His funeral took place Wednesday morning, January 23, 1884, at 10 o'clock, from St. Aloysius church, where a funeral mass was celebrated and a brief sermon preached by the Rev. Father Murphy. The church was well filled by the profession and friends of the doctor, many of whom joined in the long cortege as it marched to Mount Olivet Cemetery, where the remains of the good physician were placed to rest.

J. M. T.

St. Louis Medical Society.—At a recent regular weekly meeting of this society, the following is reported as a part of its proceedings:

Dr. Atwood, from the Committee on Ethics, reported the resolution of Dr. Pollak, offered at previous meeting, protesting against the custom of physicians holding chairs in medical colleges advertising themselves in the circulars and catalogues of the colleges. The report states that such advertising is not only a violation of the Code of Ethics, but highly reprehensible, tending to lower the standard of the profession and to bring into disrepute medical colleges; also, that the reference in such circulars to clinical practice and free dispensaries was also a violation of the Code. The report was adopted.

MISCELLANEOUS.

THE TUBERCLE BACILLUS.

[To the Editor of the *Canada Lancet*.]

Sir:—I send you the following lines, which you may thing worth inserting: "A saturated watery solution of carbolic acid, even though it acts as long as fifteen minutes, is not sufficient to arrest the development of the tubercle babilli."—*Braithwaite*, July, 1883; p. 73.

What say you, Koch, can this be true?
(The very statement seems to chill us);
Is there, then, nothing we can do
Against this terrible bacillus?

A molecule, brandishing fell darts,
Arm'd, in the air, to meet and kill us;
Or burrowing in our vital parts,
Oh, dread, invincible bacillus!

Monster! in microscopic space,
Who doth with seeds of death instil us;
Hast thou no vulnerable place,
No heel like that of old Achilles?

Has science nought for such a foe,
(Just as new hope began to thrill us)?
Come! who will strike a mortal blow
And vanquish the renowned bacillus?

Yours, &c.,
Thomas W. Poole, M.D.

Lindsay, Nov., 1883.

Surgical Diseases of the Kidney.—At the annual meeting of the British Medical Association, Mr. Clement Lucas opened a discussion on "The Surgical Diseases of the Kidney, and the Operations for their Relief," of which the following is an abstract: He commenced by stating that the greatest advances in the treatment which had taken place of late years, were those made in the indefinite border-land which separates medicine from surgery. In was in this barren and desolate tract we must look for fresh discoveries. Ovariotomy and the various operations upon the intestines and stomach he put forward as instances of work recently advanced in this territory, but he claimed as the most remarkable incident of this decade, the sudden light which fell upon the profession in its relation to renal disease and the rapid growth and recognition of renal surgery. The credit of having awakened a new interest in renal diseases, and of having, by experiment on the lower animals, made sure of his ground, was due to the late Professor Simon, of Heidelberg, who in 1869 successfully performed nephrectomy for the cure of a fistula of the ureter following ovariotomy. Since then, extirpation of the kidney has been performed upwards of a hundred times. The operation of nephrotomy has been much more frequently undertaken, and the removal of a stone from the kidney, which used only to be attempted when a sinus or tumor existed, has been several times successfully performed before the kidney had suffered any severe damage.

In casting a glance over diseases of the kidney to

determine which might admit of surgical treatment, it was necessary to exclude at once all such diseases as attack equally the two organs; hence, the various degenerations, included under the name of Bright's Disease and lardaceous disease, must ever remain outside the province of renal surgery. On the other hand, conditions which disturb the functions of one organ only, for the most part admit of relief by operation.

Painful moving or floating kidney being only a mechanical disturbance, admits of relief only by mechanical means. Simple exploration and replacement through an incision in the loin would probably be found sufficient, in the majority of cases, for the cure of this condition, the adhesion resulting, serving to retain the organ in position. Stitching of the capsule to the parietes, or, as it is termed, nephroraphy, is a somewhat serious, but still simple, undertaking. In eight cases in which it has been performed the patients all recovered and were relieved. There might still be cases where intense suffering was experienced and where the other means had failed, which would suggest nephrectomy. Martin, of Berlin, had in six cases removed floating kidneys through the peritonæum, and four of these recovered.

Hydronephrosis, a dilatation of the pelvis and calices of the kidney with watery fluid as a result of obstruction below, admitted of surgical treatment when one-sided. After detailing the various conditions of the ureter, congenital and acquired, which might give rise to this condition, the author suggested these cases should be first aspirated, then cut down upon and drained through the loin; the cyst-wall being stitched to the parietes. Finally, should the fistula fail to close, the remains of the kidney might be returned through the loin.

In women these tumors had been often mistaken for ovarian tumors and had been operated upon as such. Being movable and not forming adhesions till late, some might advocate ventral nephrectomy for these cases before drainage, but such treatment would entail more risk than the method advocated. Abdominal nephrectomy for hydronephrosis will, however, show better results than nephrectomy generally.

Large isolated cysts of the kidney having no communication with the pelvis were rare. They should be aspirated, and afterwards drained through the loin.

Hydatids of the kidney, also rare, had a tendency to discharge themselves through the pelvis. When forming tumors, they could generally be cured by aspiration or syphon-tapping.

Pyonephrosis, which resembles hydronephrosis anatomically, but contains pus instead of urine or watery fluid, when unilateral falls under renal surgery. The double pyelitis, with suppuration and distension, which commonly resulted from stricture and enlarged prostate, the author said was inappropriately named "surgical kidney." He suggested the term reflux pyelitis as better expressing this condition. Reflux pyelitis when one-sided was due to some obstruction in the ureter, and then often gave rise to a large pyonephrosis. Other causes of unilateral pyonephrosis were calculus and strumous pyelitis. After speaking of the diagnosis and stating that these tumors were more adherent, and gave rise to more pain and constitutional disturbance than hydronephrosis, he said that nephrectomy for pyonephrosis had been performed twenty-eight times, and of these seventeen recovered and eleven died, but it was most worthy of notice that among these twenty-eight cases six had previously discharged their contents through a fistula in the loin, and all these recovered. Hence, he argued, it was better to drain a pyonephrosis before performing nephrectomy.

Neoplasms of the kidney could only be treated by nephrectomy, and if this were performed early, there might be a good chance of permanent benefit. Generally they were too large to be removed except through the peritonaleum, but of five cases removed through the loin, four recovered. Out of sixteen removed by ventral incision, ten died and six recovered.

Calculus of the kidney offered an excellent field for surgical interference, but the difficulty was to make sure of the diagnosis. Many cases of supposed calculus would turn out to be strumous kidneys. Two cases were related in which the kidney was explored, and even deeply punctured, but no ill-result or rise of temperature followed, and the wounds nealed primarily. Several cases of nephro-lithotomy were recorded in the Clinical Society's Transactions, and two cases had been performed successfully at Guy's Hospital during the present year. When the kidney was much dilated and damaged, it would be a question whether it might not be better to remove it.

After briefly alluding to injuries to the kidney, which, though not included under the title of the paper, might suggest nephrectomy, the author proceeded to speak of some details in operating. He recommended for the lumbar operation a combination of two incisions which he had employed as giving the most room, viz.:—an oblique incision higher than the colotomy incision within about half an inch of the last rib and parallel with it, and a vertical incision on the outer margin of the quadratus lumborum extending from the upper edge of the last rib to the iliac crest. For the transperitoneal operation, Langenbuch's incision external to the rectus muscle was to be preferred to the median incision, as it enables the operator better to reach the kidney through the outer layer of meso-colon.

In conclusion, he urged, that antiseptic exploration of the kidney through the loin is a simple and not at all a dangerous operation, which may be undertaken without anxiety in any case where calculus is suspected; that it is generally wiser to tap and drain fluid tumors of the kidney before proceeding to remove the diseased organ; that when nephrectomy is decided upon, the extraperitoneal operation through the loin should always be chosen for any tumor it is possible to withdraw through the limited space at disposal; finally, if this course be adopted, the transperitoneal operation will be reserved for large solid tumors, and, perhaps, some floating kidneys.—*British Medical Journal.*

CASE OF BASILYSIS.—In the Section of Obstetric Medicine, at the annual meeting of the British Med-

ical Association, 1883, Dr. J. Halliday Croom described a case where this operation was found necessary:

Among the recent improvements in operative midwifery, the operation of basilysis, as a means of comminuting the fœtal basis cranii, deserves to occupy a prominent place. Devised by Dr. A. R. Simpson some years ago, and carried out by him in practice, it has, in my opinion, quite fulfilled the expectations he formed of it. I gladly take an opportunity of a recent case, which occurred under my care in the Maternity Hospital, to bring this operation under the notice of the Section. The case was as follows:

S. W., a primipara, aged 26, was sent to the Maternity Hospital on the forenoon of Sunday.

At the time of her admission she was well advanced in the second stage of labor; the membrane had ruptured early in the morning, and a loop of the cord had prolapsed in advance of the head. I saw her shortly after admission, and found the conditions as described; and further found, on abdominal palpation, a very prominent uterine tumor; the head at the brim, but unengaged, and back to the left. There were no fœtal heart-sounds to be heard.

On vaginal examination, the head was presenting, the membranes ruptured, and a loop of cord prolapsed and pulseless. The occiput was to the left, and the sagittal suture transverse. The conjugata vera diameter, gauged by the diagonalis, measured slightly less than two and a quarter inches. The pelvis was a distinct rickety one. The indications, therefore, for reducing the head were obvious. This I did with the basilyst in the following way: With the assistance of Dr. Barbour, the head was steadied thoroughly at the brim, and the basilyst introduced at the most centrally presenting part of the right parietal bone. The cranial vault was easily pierced, and the instrument pressed down through the cerebral substance to the base of the skull. While Dr. Barbour kept the head perfectly steady, I screwed the basilyst home into the base, and, closing the handle, easily effected separation of it. The head immediately collapsed, and was pushed by Dr. Barbour through the brim, with slight aid on my part with the crotchet. Indeed, the use of the crotchet was almost unnecessary, as, after the collapsed head was well pushed into the brim, its extraction was mainly accomplished by the hands *per vaginam*, aided by suprapubic pressure.

On examination of the head after birth, it was found that the basilyst had entered the right parietal bone, and then passed down to the basi-occipital, just behind the foramen magnum, and the base was found to be splintered both laterally and anteroposteriorly. The disintegration of the base of the skull was remarkably complete, as the recent preparation which I now exhibit shows; and the great diminution in the bulk of the head is obvious from the fact that suprapubic pressure was of itself sufficient, with but little aid from the crotchet, to push the head through the brim.

Remarks.—The introduction and working of the instrument are simple enough, but there is one point which, in a former case, offered some difficulty; namely, the doubt, after the basilyst has pierced the vault, as to whether it goes directly to the base. This is more apparent than real, for, if the head be well steadied, and its position distinctly made out, there can be but little risk in pushing the instrument straight on in the proper axis. Of course, in cases of extreme flexion, it will be easier to strike the center of the base than in a case of flat pelvis, where marked Naegele obliquity is combined with extension.

This is illustrated in the case I have just recorded, where the basi-occipital bone was struck instead of the sphenoid; but, as the case shows, the result was none the less satisfactory. In any case, the risk of missing the base is very slight. It has been urged against this method of comminuion and delivery, that some instrument for extraction in addition to the basilyst is required. First of all, let me point out that, in the case in point, with a head perforated at the occiput, and with a two inches and a quarter brim, suprapubic pressure was almost enough to effect delivery, and secondly, it must be kept in view that a second perforation of the base can always be performed when necessary, reducing the whole head to a veritable pulp, and allowing it to pass through the pelvis with the aid of the hands and suprapubic pressure alone. It has, therefore, the advantage over cephalotripsy and other forms of embryulcia, that delivery is accomplished without the application of any instrument external to the head.—*British Medical Journal.*

List of Changes in the Medical Corps of the Navy During Week ending January 12, 1884.

Surgeon D. McMurtrie ordered to the Naval Rendezvous, Philadelphia, Pa.

Surgeon A. F. Price detached from the Receiving Ship St. Louis on the 15th, and ordered to the U. S. S. Ossipee on the 22d.

Past Assistant Surgeon A. C. H. Russell ordered to the U. S. S. Ossipee on the 22d.

Past Assistant Surgeon H. C. Eckstein detached from the Naval Hospital, Philadelphia, and ordered to the Receiving Ship St. Louis.

Past Assistant Surgeon Howard Wells from the Naval Rendezvous, Philadelphia, and ordered to the Naval Hospital, Philadelphia.

Official List of Changes in the Stations and Duties of Officers Serving in the Medical Department United States Army, from January 4, 1884, to January 11, 1884.

Brown, P. R. Captain and Assistant Surgeon: assigned to duty at Fort Huachuca, A. T. (Par. IX., S. O. 119, Department of Arizona, Dec. 27, 1883.)

Havard, Valery, Captain and Assistant Surgeon: assigned to duty in charge of office of Medical Director, Department of Texas, during the temporary absence of that officer. (Par. II., S, O, 164, Department of Texas, Dec. 31, 1883.)

Egan, P. R., First Lieutenant and Assistant Surgeon: upon reporting of relief to proceed without delay from Fort Huachuca, A. T., to Fort Apache, A. T., and report to the commanding officer for duty at that post. (S. O. 119, Department of Arizona, Dec. 27, 1883.)

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ORIGINAL ARTICLES.

REPORT OF THE STANDING COMMITTEE ON METEOROLOGICAL CONDITIONS AND THEIR RELATIONS TO THE PREVALENCE OF ACUTE DISEASES.

BY N. S. DAVIS, M.D., LL.D., OF CHICAGO, ILL., CHAIRMAN OF THE COMMITTEE.

[Presented to the American Medical Association in session at Cleveland, Ohio, June 7, 1883.]

In the report which your committee had the honor of making to the Association at its last annual meeting, it was stated that the plans had been completed and the work actually commenced on the first day of January, 1882, for securing the results of three parallel series of coincident observations in twelve different localities, namely: Boston, New York, Philadelphia, Baltimore, Mayport, New Orleans, Cincinnati, Chicago, St. Paul, Pittsburgh, Denver and San Francisco. To these were subsequently added Lansing, Mich., and Lawrence, Kansas. One series consists of the observations and records made at the Signal Service stations in the several places named, full abstracts of which have been kindly furnished to the chairman of your committee under the order of the official head of that bureau of the general government. Another series consists of a daily record of the ozone or active oxidizing agents in the atmosphere in the same localities, made by competent scientific men whose names were given in the report of last year. In this series all the observers are furnished with uniform test papers, and uniform instructions with scales and blanks, under the supervision of Prof. J. H. Long, of the Chemical Laboratory of the Medical Department of the Northwestern University (Chicago Medical College) in Chicago. In most of the places this series of observations has been continued through the year 1882, the time covered in this report, with entire faithfulness, and the results neatly tabulated for each month by Prof. Long, which tables constitute a part of this report. A few of the observers, located in the central part of large cities where the results were almost entirely negative, became negligent, as will be seen by inspecting the tables in detail.

To this series was also added in Chicago a daily record of the organic or albuminoid matters in the atmosphere, as carefully determined by Prof. Long, whose complete observations commenced on the first of September, 1882, the result for the first six months of which will be given in this report as tabulated and explained by himself. So far as your committee are aware, this is the first record of reliable determinations of the quantity of organic matter in the atmosphere *daily* through an entire year, made in this or any other country.

The third series of observations consists in ascertaining and recording the date of commencement of all acute diseases by physicians in active practice in the same localities where the other series of observations are in progress.

In the report of your committee last year, it was stated that a sufficient number of active practitioners had volunteered their services in all the places selected except in New York and Philadelphia. In the latter only three, and in the former not one, out of a large number of members of the Association who were applied to, appeared willing to engage in a work of much profit to themselves, and of great importance in obtaining data for determining more accurately the real causes of disease. In using the expression "profit to themselves," we do not, of course, mean direct pecuniary profit, but what is of more value to the physician, namely, the acquisition of a habit of closer inquiry concerning the origin and progress of the diseases he is called upon to treat, and of much greater exactness of mental discipline, with a corresponding increase of professional knowledge. The whole number who did volunteer their services for this part of the work was forty-one; of whom only eleven, however, actually reported the results of their observations at the end of the year. Small as is this number, the facts they furnish, taken in connection with the other series of observations, are of much value, as will be seen in the sequel. But if the work of your committee is to be continued, the number of workers in this department can be steadily increased until the results are all that could be desired. By the three series of observations and records just described, we are placed in possession of the facts concerning all appreciable conditions of the atmosphere, including the barometric pressure, temperature, moisture, direction and velocity of winds, rainfall, sunshine and clouds, in twelve localities, in one of which is added the oxidizing and organic constituents, for every day and night of 1882. And to a limited extent, in the same localities for the same

period of time, the facts in relation to the beginning and prevalence of acute diseases. These facts, observed and recorded by independent workers, acting coincidently under uniform instructions, are capable of analysis and study in several important directions. First, we find much that is of interest and value in comparing the various items contained in the meteorological part of the records with each other, and tracing both the relations and absolute changes connected with the different seasons of the year. And when the records have been carried through a series of years, deductions of still greater interest can be made by comparing the variations of all these items in one year with those of another.

Second, by comparing the date of commencement of the several acute diseases with the atmospheric conditions, we are enabled to determine with much greater accuracy the direct agency of certain of these conditions in determining the degree of prevalence of several important endemic diseases, as typhoid fever, pneumonia, and bowel affections of children. In some of the localities we have been able to carry this comparison through three successive years, thereby ascertaining very definitely the reasons why the same disease (pneumonia, for instance) reaches its highest point of prevalence in January of one year and in April or May in another year, in the same community and under the same sanitary measures. We have also been able to find very satisfactory reasons why there were four or five times as many cases and deaths from typhoid fever in the same community in 1881, as in 1880; and 33 per cent. more than in 1882, notwithstanding the logical inference and expectation based on the popular germ theory of its propagation would be, that the extraordinary production and diffusion of the supposed germs during the epidemic of 1881, would be followed by a still greater prevalence of the disease in 1882. To give the detailed results of the analytical examination of the three series of records before us would weary your patience, as they can be appreciated only by careful reading in print. Consequently we will pass them, and only detain you with a brief but interesting statement from Professor Long in regard to the progress and results of his daily observations concerning the ozonic or oxidizing agents and the organic matters, and the relations of these two classes of agents to each other.

"Observations on the amounts of free ammonia and nitrogenous organic matter present in the atmosphere have been carried out during the past nine months by the method proposed by Chapman (*Chem. News*, 1870, page 65), and elaborated by Remsen (*Nat. Bd. Health Bull.*, Sept. 11, 1880).

In brief, the method consists in aspirating a certain definite volume of air through an absorbent tube containing coarsely powdered pumice-stone, which possesses the property of absorbing nitrogenous gases. If the contents of the tube be now thrown in a retort with pure distilled water and a little carbonate of soda, on the application of heat what is known as free ammonia distills over. This includes the ammonia existing in *ammonium* compounds.

Then, after driving off the free ammonia, if a strong solution of caustic potash and permanganate of potash be added, what is known as albuminoid ammonia distills over. This ammonia does not exist as such, but is formed by the action of the strong oxidizing solution on nitrogenous matter.

The ammonia, as it distills over, is collected and tested by the Nessler reagent, as in the examination of water by the Wauklyn method.

As to the method itself and results obtained, there are several points suggested by this long trial which might be mentioned. Prof. Remsen showed in his paper that by careful work fairly comparable results could be obtained, and in a number of preliminary experiments tried by myself a year ago, and reported on at the last meeting of the Association (through Dr. N. S. Davis), I was able to verify this statement. Subsequent work showed that the liability to error is about the same as in the testing of water by the method just referred to.

While examining these sources of error several very interesting papers appeared in print, and observations I had made were fully confirmed by them. More recently, these sources of error in the determination of free and albuminoid ammonia have been pointed out very fully by Prof. J. W. Mallet (*Am. Chem. Jour.*, Vol. 4, Nos. 4 and 6), and precautions for avoiding them as far as possible suggested. Experience had already pointed most of these out to me. The condensation of the ammonia evolved is a very important part of the process, and more difficult than usually supposed. To save the ammonia, it is necessary to distill very slowly, and to pass a good stream of cold water through the condenser.

At the commencement of the investigation (April, 1882) another source of error suggested itself. I found that in operating on artificially polluted air, the amount of ammonia obtained by treating the pumice stone in the retort directly with the permanganate solution was much greater than the sum of the free and albuminoid ammonia obtained in the usual way. I convinced myself of this fact by a number of experiments, but other duties interfering, I was obliged to drop the investigation for the time, and some months elapsed before I could take it up again.

In the meantime I learned that a similar phenomenon had been observed by Prof. Remsen, while engaged in investigating the water supply of Boston a year before, and in a paper by Mr. Marsh (*Am. Ch. Jour.* IV., 3,) experiments illustrating the same point are described. It appeared, then, that in the distillation certain nitrogenous compounds were volatilized before being converted into ammonia. In my experiments with an artificial atmosphere the amount of organic matter present was very large, and it would be hardly fair to assume that a natural atmosphere would show the same results. During the past few months I have carried out a number of parallel experiments to decide this point, and without going into details, I will simply say that very little, if any, volatible albuminous matter seems to be lost in the first distillation. In a number of tests I could observe no increase of ammonia by direct treatment with the oxidizing liquid. In other tests a slight increase was noticed, but the excess was within the

limits of error of observation. Other parallel tests are still in progress, and perhaps the atmosphere will show different results at different times.

On the whole, then, it may be said, the method is fairly accurate and gives good results, but when one takes into consideration the very minute quantities of matter dealt with, it will readily be perceived that the greatest care must always be observed in manipulation. In the hands of a single observer results can be obtained which are comparable with each other, but I fear that results obtained for free ammonia by different observers could hardly be compared with fairness, as the difficulty of measuring such minute traces with anything like accuracy is very great, and different persons would approach the true result with different degrees of sharpness. This I consider the weakest point in the method. Of course large volumes of air might be aspirated, but there are practical objections in the way of aspirating more than 100 liters daily.

A few words as to results of observations. The amounts of free and albuminoid ammonia expressed in grammes per thousand cubic meters of air are as follows:

The results are means of daily observations.

	Free.	Alb.
September	.051	.110
October	.021	.093
November	.022	.085
December	.024	.105
January	.022	.091
February	.044	.096
March	.019	.073
April	.016	.059

It will be noticed that the free ammonia is always much smaller than the albuminoid. In September a large amount of free ammonia was registered, and this I can not now account for. In February also the amount is large. On several days during the fall of sleet in this month considerable quantities of free ammonia were detected. On many occasions I have noticed that a large amount of albuminoid ammonia could be connected with a very bad odor coming from the direction of Bridgeport (a dirty manufacturing part of the city).

Another point noticed seems to me of considerable interest. Several times during the winter a certain window of the college dissecting room was left open by the janitor, and by this means the external air became contaminated immediately over the point where my aspirator was at work. I found that at such times there was a marked increase in the amounts of free ammonia, but scarcely any change in the albuminoid. These results suggested several additional experiments. I placed a piece of decaying meat in a shallow dish, covered the bottom of the dish with water (leaving the surface of the meat exposed, however), and allowed the whole to remain in a closed room for some days. A number of examinations of the air were then made by the above method, all of which showed a considerable increase in the amount of free ammonia, but very little in the albuminoid over what might be expected from the external atmosphere. Now, without removing the meat, a Siemens ozone generator was put in operation in the room, and sufficient ozone generated to give a slight reaction on test paper, Schönbein and Thallium, suspended near the aspirator.

The ozonizer was operated at short intervals during a day, and at the same time air was drawn through a pumice-stone tube for examination. This showed a marked reduction in both free and albuminoid ammonia. This experiment was followed by other similar ones, all of which went to show that the moist organic matter could be oxidized into something not capable of yielding ammonia.

About a week later the experiments were repeated. In the meantime the meat had become thoroughly dry and the stench had nearly disappeared. An examination of the air now showed a decrease in the free ammonia, and a considerable increase in the albuminoid as compared with the previous experiments. Ozone papers failed to show a reaction now, when suspended as before, although the generator had been kept at work a much longer time. These results seem to indicate that dry decaying matter is capable of producing more albuminoid ammonia than moist, a probability which has been pointed out by Dr. Carmichael and Prof. Remsen. During the summer I expect to carry out more extended experiments on this question.

JOHN H. LONG,
Chemical Laboratory of Chicago Medical College."

FINANCES.

In regard to expenditures, your committee report that, on the completion of the first six months of his work in determining and recording the organic constituents of the atmosphere, $250, being one-half of the special appropriation made for that purpose, was drawn from the treasury and paid to Professor Long, leaving of that appropriation $250 still in the treasury, to which the professor will be entitled as soon as the year's observations are completed. For the other departments of your committee's work no money has been drawn from the treasury during the past year, although bills to the amount of $108.60 have been paid by the chairman of your committee. Sixty dollars of this was for one Kilo Thallium Metal imported from Germany free of duty, the rest for printing and blanks, for all of which vouchers in the form of receipted bills accompany this report. At the date of our last annual report there remained in the treasury an unexpended balance available for the committee's expenditures of $290.28. If the sum just named as the amount expended during the past year is paid, there will still remain of the original appropriation an unexpended balance of $181.68 in the treasury. Your committee will therefore close this abstract of their report by asking the Association to adopt the following propositions:

First, That your committee be authorized to furnish their report for publication as a part of the Transactions of the Association, and to continue the investigations now in progress, with the privilege of drawing on the Treasurer for so much of the unexpended balances of former appropriations as may be necessary during the coming year.

Second, That the thanks of the Association be

tendered to the Superintendent of the Civil Service Bureau, Gen. Hazen, for the enlightened and generous aid he has rendered by causing your committee to be furnished with full abstracts of the meteorological records made at the several places selected, and that he be requested to continue the same favor during such time as the committee may desire.

All of which is respectfully submitted.

N. S. DAVIS, Chairman.

P. S. Details of observations and analysis of the same will be given in the next number of the JOURNAL.—EDITOR.

REPORT OF A CASE OF DOUBLE-HEADED MONSTROSITY.

PRESENTED BEFORE THE MARION COUNTY MEDICAL SOCIETY, INDIANAPOLIS, IND., NOV. 14, 1883.

BY JOSEPH EASTMAN, M.D., PROFESSOR OF DISEASES OF WOMEN AND CLINICAL SURGERY IN CENTRAL COLLEGE OF PHYSICIANS AND SURGEONS.

[Reported by Dr. H. I. Raymond.]

There is a two-fold interest in the subject-matter of monsters. First, as it presents itself to the mind of the practical obstetrician; and second, as it calls into exercise the subtle reasonings of the speculative physiologist.

The simple scientific investigation of the subject may in the end yield as practical results as the investigation of the matter for purely clinical purposes, inasmuch as the scientific teratologist may some day afford some rational clue to the semiology of monster formation, and the physiologist be enabled to suggest much looking toward the prevention of psychical impressions likely to modify the normal processes of nutrition and growth.

The clinical features of this subject-matter will be best brought out by simply relating the history of the present case.

The size of patient's abdomen was enormous, so much so as to excite in her own mind an apprehension of twin conception. To remove suspense, she called me in as her medical adviser ten days previous to her expected confinement. I could map out but one body, and that with difficulty, owing to the excessive accumulation of the liquor amnii.

I assured the patient that the head of the child was downwards; that nothing was wrong; no twins; simply an enormous accumulation of waters.

One week later, the patient was confined at night, the first intimation of labor being rupture of the membranes with escape of one and a half buckets of water, literally flooding the bed.

I was in attendance immediately, and found a dry labor in a primipara of nineteen. The abdominal swelling had disappeared; the uterus was reduced in size; but one child could be mapped out by external palpation, and but one head felt by vaginal examination.

The head soon advanced to the perinæum, the chin rotating under symphysis pubis; labor then only slightly progressive.

The pains were inefficient; three hours had been spent in waiting.

Forceps delivery was decided upon, and the instruments applied. On making traction, great difficulty was encountered in the withdrawal of the head.

The forceps were then removed, and the finger of the accoucheur was passed up the parturient canal, for the purpose of hooking down the child's arm. But the finger found no axilla. It detected a hard, round object, sensibly a second head. By conjoined manipulation but one body could be mapped out.

The pains were hard, but not sufficient to effect delivery. The first head was now brought up sharply over the pubis. The second head pressed against the perinæum. Forceps were applied and delivery effected.

During these manœuvers the accoucheur's attention was abstracted for the moment from the administration of the chloroform, which was done by the friends, and, as it happened, the patient passed into the third stage of anæsthesia, so that she was profoundly under the influence of the anæsthetic at the time of delivery of the second head, and it is thought this condition of complete muscular relaxation enabled the operator to deliver such heads with but a slight abrasion of the perinæum—so slight as to require no surgical treatment. There was neither any laceration of the cervix uteri. The diameter of the second head, and neck of the first head of the monster, as apposed in the genital outlet, measured a little more than six inches.

The subject of monsters in relation to practical obstetrics is treated of very meagerly in works on midwifery. It is frequently dismissed with the statement that such developments do not usually carry to full term, and no difficulty, therefore, will be met with

in their delivery, which teaching is not of much help to an accoucheur dealing with a full-sized double-headed monstrosity weighing 10 pounds.

It should be remarked further, that this particular monstrosity was not simply a fusion of two complete corporeal organisms, nor yet an abnormal development of one, but presented a perfect and entire and fully developed fœtus with an annexation of an extra cephalic extremity, with its own proper cervical vertebræ.

There was, however, blending or fusion of the respective dorsal portions of the columns.

In speculating upon such freaks or perversions of nature as are exhibited in her monstrosities, the endless subject of nævi materni or mothers' marks comes to the front, albeit no vascular connection exists between the mother and fœtus in utero.

A case, apropos, occurred in my practice about two years ago, which I will relate.

I was asked to treat a man with perineal fistula, existing in the line of incision in right lateral lithotomy.

I ordered poultices to be applied. The wife herself applied the poultices, and attended to their removal and reapplication with assiduous care.

Ten months later I attended this lady in confinement, and delivered her of a male child that presented as perfect a case of hypospadias as I had ever seen.

The urethral outlet of the child was exactly at the point on the right of the median raphé corresponding to the point at which the urethral fistula in the father existed.

REMARKS.—The American Cyclopædia informs us that Isidore Geoffroy Saint Hilaire restricted the term monster to "congenital anomalies of conformation, involving change in the form, structure, volume, position, and number of parts."

He recognized two classes of monsters. 1st, those whose make-up included the elements of only a single individual. 2nd, those whose conformation involved parts, complete or incomplete, of two or more individuals.

The present monstrosity would come under the second variety of his classification, in which were present a complete individual, with parts of an incomplete individual annexed.

Injection of fluid into the œsophagus of the neck to which the body rightfully belonged, caused meconium to be extruded through the anus, but no fluid could be made to regurgitate from the stomach up the gullet of the second head, and on dissection no œsophagus for the second head could be found.

The arterial systems freely communicated, since alcohol injected into one common carotid saturated both systems. Dissection revealed two hearts enclosed in a single pericardium.

POTT'S DISEASE.

THE MECHANICAL TREATMENT OF DORSAL CARIES WITH GREAT DEFORMITY.

BY CHARLES E. WEBSTER, M.D., CHICAGO.

[Read before the Chicago Medical Society.]

There are already before the profession a great number of forms of apparatus for the treatment of Pott's Disease. Too often the inventor claims to have discovered the only perfect machine that is universally applicable.

It is not for the purpose of adding to this list that I prepare this paper, but for the purpose of discussing the merits of a particular form of apparatus which is applicable to a particular class of cases.

On visiting the office of any great orthopædic surgeon and watching the run of his practice, it will be discovered that many with dorsal caries, however they may have been treated, grow progressively worse. In fact, one candid gentleman remarked, "We can't expect to do much with these patients." I propose to consider the mechanical problem presented by such a hopeless case, and to demonstrate the form of apparatus which is best adapted to its treatment.

In chronic non-suppurative spondylitis, when after years an indefinite number of the dorsal vertebræ have been invaded, there are both general and local causes that perpetuate the disease. The general health of the patient is bad. Whether this arises from a peculiar diathesis or is the result of the disease, is a question the discussion of which is unnecessary to the present inquiry. The local causes arise from irritation of various kinds. This may be due to the motion of the heads of the ribs, to the lateral and back-and-forth motion between the vertebræ, and to the pressure of the superincumbent parts.

It is unnecessary to detail all the resulting changes. The crumbling of the spinal column lowers the head and shoulders, pressing the sternum forward

and the spinous processes backward. The capacity of the thorax is diminished. Let us presume that this process, with the commonly resulting curvature, has progressed until the ribs reach the crest of the ilium, and the patient is anæmic and emaciated.

In the treatment of such a case we are compelled to consider the general condition of the patient; the diminished capacity of the chest; the local irritation by the ribs, by lateral motion, and by the superincumbent weight; lastly, the resulting deformity.

Whatever may have been the original cause of the trouble, the general health is undoubtedly impaired by the pathological processes taking place. If the caries can be arrested, the nutrition, circulation, and nervous condition will improve.

It is of the first importance that the treatment should permit exercise in the air, as well for the indirect advantage of having the patient occupied by pleasant pursuits as for the direct advantage to his general health. This applies with full force only to cases where the age of the patient renders his confinement particularly irksome, and his size prevents him from being readily carried out of doors. Such medicines may be given as, in the judgment of the physician, are indicated. It may be assumed, however, that the better the judgment of the physician, the less the medicine that will be given, for a good diet, fresh air, and the arrest of the progress of the disease by suitable support, are the chief requirements of the case.

The capacity of the thorax, naturally diminished by the disease, is generally still more reduced by surgical interference. Corsets, braces and plaster-splints having, by their lacing, strapping and bandaging, flattened down the sternum and twisted the yielding ribs and cartilages around each other in such a way as to materially interfere with the respiratory function.

In such a case any further restriction of the thorax is unwise.

The motion of the heads of the ribs in respiration undoubtedly acts as an irritant. It can be readily prevented by constricting the chest, but for reasons just stated, this is inadmissible, and it may even be necessary to encourage such motion at the expense of temporarily increased inflammation for the sake of additional lung room. Were the size of the chest little affected this precaution might be unnecessary.

Lateral motion is self-limited by the irregularities of the vertebræ, as well as by the production of connective tissues binding together the diseased bones. The application of a posterior splint with a view to limiting the lateral and antero-posterior motion, is inexpedient for the following reasons:

It is difficult to make a splint bear evenly around an abrupt curve.

If applied, it cannot be rendered efficient without constricting the chest.

Pressure will be unequal, and liable to cause additional irritation.

Theoretically, it is inapplicable, for the greatly deformed spine cannot be bent straight, thus throwing the weight of the superior parts on to the transverse and articular processes.

Clinically it fails.

The prime factor in perpetuating the caries is downward pressure.

It is constant while the body is in the vertical position, and the jar of every step; the weight of every article of clothing; the strain of every movement of the arms adds to its potency. This is demonstrated as well by the action of the patient as the course of the disease. The patient supports himself by the hands on the knees, the elbows on the table, by resting the head on the hands, and finally is obliged to assume the horizontal position in order to relieve himself of the weight which is grinding out the bodies of his vertebræ, and allowing the crumbling spinal column to topple over in the direction of the least resistance.

It is necessary to support the weight of the parts above the point of disease. This is best done by placing the patient in the horizontal position. As previously shown, this mode of treatment may be counterindicated.

The weight to be supported consists of the head, arms, and that portion of the trunk superior to the part of the spine which is diseased. The only part of the body affording a base of support for apparatus to sustain this weight is the pelvis. In individuals whose hips are not sufficiently flaring to give a proper base, other modes of treatment must be adopted.

For the reduction of the deformity several methods are employed. The posterior splint producing pressure on the point of curvature. Suspension by the head and axile, and rest on the back in the horizontal position. By either method the deformity can be reduced. In the first, by crowding down the spines or lateral processes of the vertebræ, and packing the diseased bones more closely together. In the second, by drawing them forcibly apart. In the third, by slight extension and the posterior splint combined.

The first method is liable to increase the inflammation by adding another cause of irritation to those already in action, althongh it may compensate by diminishing some existing causes, as the lateral motion.

The second method gives the most immediately gratifying results, markedly diminishing in a few minutes the most glaring deformity. It is likewise the most dangerous. The tearing apart of the diseased bones is liable to increase the existing inflammation, cause hæmorrhage, or lead to meningitis of the cord. Neither is it demonstrated that the reparative process can fill in the breach between the bones and thus effect anchylosis.

Lying on the back may be inexpedient for general reasons previously stated.

On account of these considerations, it seems preferable to use such an amount of extension as shall prevent pressure on the diseased surfaces, and that this slight extension should be constant through a long period of time, thus gradually permitting the bones to accommodate themselves to a more normal position without endangering the life of the patient, increasing his sufferings, or delaying his cure. In general, it may be stated, that any treatment of the deformity as such is bad surgery.

To summarize: The general condition of the pa-

tient is such that exercise is necessary. The deformity is such that constriction of the chest is inadmissible. Irritation by the motion of the ribs is unavoidable. A posterior splint may be harmful, and is unnecessary if the two ends of the spine can be kept in a fixed relation by apparatus that removes the weight from the diseased bones. The deformity itself is not a proper object of treatment. From these premises I deduce the following proposition:

In advanced cases of Pott's disease, with great deformity of the thorax, support of the weight of the parts superior to the disease, with slight extension, is sufficient treatment, while other interference may be dangerous.

In view of this proposition, I have devised, constructed, and by several years of trial practically demonstrated the usefulness of the following apparatus, which consists of the parts shown in the cut:

(*c*) The pelvic base carrying on either side crutches to support the arms and a rod at the back to support the head. (*b*) The neck piece permitting the lateral motion of the head. (*a*) The head piece permitting the nodding motion of the head.

The pelvic base is of sheet steel, hammered to accurately fit the parts to which it is applied. It extends from just below the anterior superior spine of the ilium on the one side along the crest of that bone, across the sacrum and along the crest of the other ilium, terminating at a point corresponding to that at which it commenced. For an adult the metal should be about $^1/_{16}$ of an inch (.0016 m.) in thickness.

From this pelvic base arise on either side short steel crutches, with carved wooden tops fitting the axilla, which slightly raises the shoulders, and thus supports the weight of the arms. At the back is a rod of malleable iron, double below, the parts being spread about four inches (.1 m.) to afford a firm attachment, and terminating above with a deep socket for the pivot of the neck-piece. This rod is made to follow accurately the curve of the spine without pressing upon it.

To remove the pelvic base, throw the shoulders forward off the crutches and turn the apparatus to one side, raising it slightly, when it readily slips off. The reverse of these manœuvers puts it into place.

The neck piece consists of an arc of iron, from the middle of which is a dependent stem fitting into the socket previously mentioned. At its ends are vertical screws slotted at the top for the bearings of the head-piece. The head-piece being lifted out of its bearings and drawn forward, the neck-piece can be taken out of its socket Thus the head supporter can be entirely removed at the convenience of the patient while sitting or lying down.

The head-piece may be made of copper, steel, or vulcanized rubber. *It must fit perfectly.* If of metal, it is to be tinned or silvered on the inside to prevent corrosion, and lined with some thick fabric to protect the skin from chill, and the uncomfortable sensation of accumulated perspiration. It should be stiffened by bosses opposite the mastoid processes. *Exactly in the line* of the axis of the occipital condyles should be attached metallic studs, the necks of which fit into the slots in the screws of the neck-piece. By these screws the heighth of the head can be adjusted.* The weight of the entire apparatus for an adult is about three pounds, or perhaps two ounces less (1120 grms.)

The chief advantage of this apparatus consists in its perfect adaptability to a class of cases hitherto the opprobrium of the profession. With slight modification it might be made to meet the requirements of other classes of cases now treated by other methods.

The motions of the head are of great convenience to the patient, and can be permitted in every case, except in disease of the cervical region. In fact, the nodding motion might be permitted in every case, except in disease of the occipito-atloid articulation. The parts in contact with the body are perfectly fitting and quite rigid, thus reducing the local irritation to the minimum.

I have diligently searched the literature of the subject, and as far as I can learn, the support of the spine by suspension of the head and arms from apparatus resting on the pelvis without constriction of the trunk, the head supporter permitting the free nodding motion of the head on the axis of the occipital condyles, as well as the perfectly well fitting pelvic base fully open in front, are new and original inventions, and I would respectfully invite a more extended test of their practical value.

The price of the apparatus (making a general statement) varies according to the skill of the mechanic employed, etc., and is estimated to be from $25 to $50.

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*For detail description of head supporter see *Boston Medical and Surgical Journal*, May 18, 1882, page 469.

EXTIRPATION OF THE SPLEEN.

A TRANSLATION, WITH REMARKS,

BY A. N. BLODGETT, M. D., BOSTON.

The recent momentous strides in the science and art of surgery, which have resulted in the development of the antiseptic and the cultivation of the aseptic systems, have materially diminished the perils of operative interference, and in the same ratio have enlarged the boundaries of the legitimate domain of the surgeon, and have opened new fields, and added new diseases to the list of those formerly considered amenable to treatment by this means. The cavity of the knee-joint, formerly one of the most dangerous portions of the human body, is now incised and drained without hesitation; the thorax is opened with impunity; the pericardium is aspirated; the abdomen is laid open and its inmost recesses explored for intestinal obstruction; the ovaries, and indeed the entire internal female generative system is excised, amputated, ligated, cauterized, and subjected to treatment in many other ways which would have struck terror to the heart of many a courageous operator of a few years ago.

So rapid have been the advances in surgical science in this direction, that some enthusiastic operators look forward to the time when the cavity of the skull shall become accessible to mechanical treatment, and every organ in the body shall be deemed suitable to surgical manipulation. Already the kidneys are within their reach, the stomach is resected, and portions of the intestine excised with recovery. The spleen, however, still remains beyond the present limits of justifiable operative procedure. How long this will continue to be true is a question which is awakening increasing interest in the minds of medical men.

In this connection, the following summary of all known cases of surgical interference in the way of excision or amputation of the whole or any part of the spleen, may be of sufficient importance to warrant it a place in the columns of an American journal. It is a translation of a review upon this subject by Dr. Albert Blum, in *Archives General de Médicine*, June, 1883, and is given in full, as follows:

Deeply seated in the left hypochondrium, between the diaphragm, the kidney and the stomach, concealed and protected beneath the lower ribs, the spleen would seem to be safe from any traumatic violence. Its great vascularity, the important role which it plays among the viscera as a uropoietic organ would lead one to suppose that the spleen was outside the legitimate domain of surgical attacks. Experience and the facts derived from medical literature demonstrate, however, on the contrary, that the spleen is not exempt from accidental injury, and with the last few years certain of the bolder surgeons have deliberately attempted its extirpation by means of direct operative interference. We desire in this review to ascertain what are the chances of a favorable result from splenotomy as the result of a traumatic injury, as well as in those cases in which its removal is attempted by the surgeon on account of some disease of the organ.

(*a.*) Splenotomy consequent to injury or hernia of the spleen.

We have collected the details of seventeen observations detailed in the monographs of Magdelain, Simon and Zesas. We have arranged these cases in chronological order:

1. Franz Rousset (Traité nouveau d'hystérotomotokie, Paris, 1581,) relates that Dr. Viard extirpated the spleen successfully in two cases of wounding of the left side, in which the organ had become dislocated and partially degenerated and atrophied.

2. Clarke (Ephem. Nat. Curios. Obs., 1676). This was a case of attempted suicide in which a wound was inflicted with a knife in the left hypogastric region. A portion of the epiploön, the intestines and the spleen immediately protruded from the wound. The surgeon, who was called three days after the injury, returned the intestines to the abdomen, resected the spleen and a portion of the epiploön, and united the edges of the wound with sutures. The patient made a rapid and complete recovery.

3. Purmann (Chirurg. Curios., 1680). A man fell from the top of a house, striking upon the left side, and in his fall a knife, which he held in his hand, was thrust into the left side in such a manner that when it was withdrawn, a portion of the spleen came with it, and the epiploön protruded from the wound. This was immediately replaced. The side was much swollen and was treated by means of cataplasms. In six weeks the patient was well.

4. Nicholas Mathias (Ephem. Med. Physicæ, 1684, "*De exciso liene ex homine sine noxa*"). A man received a wound from a knife in the left hypochondrium. On the next day Mathias was not able to replace the spleen, which protruded in the shape of a hernia. After applying a ligature he extirpated the spleen, and three weeks after the operation the patient was well and able to resume his occupation.

5. Hannaeus (Ephem. Nat. Curios., 1698). A peasant received a blow from a knife in the left hypochondrium, and the spleen partially escaped from the wound. The medical attendant, who first saw the case two days after the injury, applied a dressing, and the patient recovered with no impairment of his health from the accident.

6. Ferguson (Philosophical Transactions, 1737) was called to a man who had received a blow from a knife. He found the spleen lying outside the wound, and already cold, black and devoid of vitality. He applied a ligature about the mortified part, and resected 3½ ozs. of the spleen. The patient recovered perfectly.

7. Wilson (*Chelius Handbuch der Chirurgie*, 1743) reports that at the battle of Wettingen, in 1743, a soldier received a wound from which the intestines and the spleen protruded. The intestines were returned to the abdominal cavity, and the entire spleen was removed. The patient recovered perfectly.

8. According to Baillous, (Observationes Chirurg.) a surgeon of limited experience, resected the prolapsed spleen in an individual wounded in the left

side without knowing that it was the spleen, and the patient made a good recovery.

9. Dorsch, (*Kopp's Jahrbuch der Staatsarzneikunst-Harless, Rheinisch-Westphälische Jahrb.*) Jan. 20, 1797, in a general riot an individual received several stabs from a knife. He at once started in pursuit of his assailant, and on the way he noticed a portion of flesh protruding from the wound. He became much alarmed, fainted, and was transported unconscious to his home. January 21, it was found that this man, aged 35 years, and who had previously enjoyed the most perfect health, had received a wound on the left side between the two lowest ribs, from which a large portion of the spleen of a pyramidal shape had escaped, and was projecting from the body. It was so wedged between the lips of the wound that, in spite of the fact that it was not sensitive to pain, it was impossible to return it within the abdomen. A ligature was therefore applied, and half, if not more, of the spleen was detached. The patient recovered quickly, and was still in good health 23 years after the operation.

10. O'Brien (*Medico Chirurg. Journal, 1816,*) reports the case of a man of 39 years, who received a wound from a knife Jan. 14, 1814, below the false ribs on the left side. O'Brien did not see the patient until some days had elapsed. The spleen was then already in a state of inflammation and disorganization. A ligature was applied at the margin of the wound for the purpose of restraining hæmorrhage, and the protruding portion of the spleen was ablated. Violent febrile reaction supervened upon the operation. Feb. 13 the last fragments of the sloughing organ separated, and left a smooth wound, the edges of which were united with adhesive plaster and appropriate dressings. March 10 the patient was discharged well.

11. Lenhossek reports (*Hecker's Medicin Ann., 1828,*) that in 1815 a peasant, aged 19 years, received a wound of the hypogastrium through which the spleen projected, and as gangrene had commenced, the vessels were ligated and the entire organ was removed. The patient recovered, and was seen three years after the accident, and then enjoyed the most perfect health.

12. Donnel (Transactions of the Medical and Physical Society of Calcutta, 1836,) removed the spleen from a man aged 30, who had received a wound from which this viscus protruded. Two months later the patient was entirely well.

13. Berthet. (*Gaz. Med. de Paris, 1843.*) A man received a cut from a knife in a street brawl. The wound was in the lower left side. Berthet was called to see the patient eight days afterward, and found a hernia of the spleen, which had already become gangrenous and extremely offensive. He applied a ligature and resected the entire organ. The patient recovered, and lived in good health for 13 years afterward.

14. C. Bell (Pathol. Medic. v. Allan Webb, London, 1844,) reports that one of his former pupils had resected the spleen in a native of South America. The organ was in a state of gangrene. The operation did not produce any detrimental effect upon the health of the individual.

15. Schultz (Deutsche Klinik, 1856,) gives an account of a case in a lady aged 22 years, who fell from the top of a hay stack and struck upon the step of a carriage. The step penetrated the body between the ninth and tenth ribs. There was no hæmorrhage from the wound, but a fleshy substance of a bluish color immediately appeared in the cut and protruded from the body. Schultz found between the ribs mentioned a body of fleshy consistency, of the size of half the fist, which secreted a reddish yellow liquid. The surface was smooth, of gray color, and in some places deprived of its envelope. The respiration was embarrassed, and there were chills and febrile reaction. From the topographical relation of the parts, it was thought that the protruding organ must be either a part of the lung or the spleen. Schultz concluded that it was the spleen, and not being able to return it to its place, performed splenotomy by applying a strong ligature and resecting the projecting portion. Three small arteries required to be tied. The edges of the wound were united by adhesive plaster, and the whole covered with charpie. The part of the spleen which was removed weighed four ounces. Its texture was greatly changed, having in some parts been transformed into a purulent mass. The first day the wound secreted a thick pus of a light yellow color. The pain was very moderate. The fever persisted, and even augmented for some days. The appetite was voracious. Fifteen days afterward the wound was entirely cicatrized, and the patient left the hospital in a state of perfect health.

16. Bazille (Rec. de Mem. de Med. et de Chirurg. Militaire) relates the case of an Arab, aged 35 years, of robust constitution, who was admitted to the hospital of Djelloul ben Achem, March 2, 1869. In a riot the patient had been wounded by a knife in the left hypochondrium. One hour after the injury a fleshy mass was observed to protrude from the wound. Examination showed a very soft structure which was thought to be the spleen. It was 11½ cm long, width 9 cm, circumference 27 cm. The general condition of the patient was very good, and he only complained of hunger. Excepting the first day there was never vomiting. A ligature was applied, and the mass was removed March 5. On the 15th of the same month the patient had fully recovered his former health.

17. Pietrzycki (Przeglod Ckanski, 1874), being called in the capacity of medical expert to a peasant woman, found the spleen partially prolapsed as the result of a wound. After fruitless attempts at replacement a ligature was placed about the organ and the prolapsed portion was removed. Fifteen days after the operation the patient was entirely cured.

These observations are for the most part not accompanied by full details, and relate to partial and not to complete extirpations of the organ. One cannot help noticing the striking fact that in *all* these cases the result was a cure, and that in no case were there subsequent troubles which could be attributed to a loss of a portion more or less considerable of this viscus.

(*b.*) Splenotomy in cases of tumors of the organ.

The numerous physiological experiments by Malpighi (1669), Dobson (1830), have demonstrated that the spleen is an organ which is not indispensable to life. More recently Vulpian (1855) extirpated the spleen from a dog, which lived for six years. Bardeleben, Crips, Legros, repeated these experiments, which were confirmed by Zesas, in 1881. This observer removed the spleen from six hares, under the influence of chloroform, and applied the Lister dressing. All the animals recovered.

Four months after the operation, a microscopical examination of the blood showed a diminution of the number of red globules; the white globules, on the contrary, were increased in number and augmented in size. On killing the animals there was found a hypertrophied condition of the bronchial and mesenteric glands.

Credé (Langenbeck, Arch., 1882) has collected 30 cases of extirpation of the spleen, as the result of errors of diagnosis and on account of disease of the organ itself. We give the list of cases below, together with the weight of the organ removed, and, as far as possible, the time intervening between the operation and the fatal termination.

1. 1549, Zacarelli. Hypertrophy. Cure in twenty-four days. Weight of the spleen, 1340 grams.
2. 1826, Quittenbaum. Hypertrophy. Death in six hours. The spleen weighed 5 pounds.
3. 1855, Küchler. Hypertrophy. Death from hæmorrhage in about two hours. The spleen weighed 1500 grams.
4. 1865, Spencer Wells. Hypertrophy. Death on the sixth day. The spleen weighed 3150 grams.
5. 1866, Bryant. Leucémie (Leucocythæmia?) Death in one hour from hæmorrhage. The spleen weighed 2000 grams.
6. 1867, Péan. Cyst of the spleen. Cured. Weight of spleen, 1140 grams.
7. 1867, Bryant. Leucocythæmia. Death fifteen minutes after the operation. The tumor weighed 4650 grams.
8. Kœberlé. Hypertrophy. Death a few minutes after the operation. The tumor weighed 6750 grams.
9. 1868, Bryant. Leucocythæmia. Death in about fifteen minutes. The tumor weighed 4650grams.
10. 1873, Kœberlé. Hydatid cyst. Death in seventeen hours.
11. 1873, Urbinoto. Hypertrophied and wandering spleen. Weighed 1300 grams. Death on the third day.
12. 1873, Spencer Wells. Leucocythæmia. Death from hæmorrhage.
13. 1873, Watson. Death.
14. 1876, Péan. Hypertrophy. Cure. The tumor weighed 1125 grams.
15. 1876, Spencer Wells. Leucocythæmia. Death.
16. 1877, Billroth. Leucocythæmia. Death by hæmorrhage in about four hours. The tumor weighed 2975 grams.
17. 1877, Billroth. Leucocythæmia. Death by hæmorrhage in about one hour. The tumor weighed 5280 grams.
18. 1877, Martin—Spleen hypertrophied and wandering. Cure.
19. 1877, Browne. Leucocythæmia. Death in five hours, from hæmorrhage. The tumor weighed 2,975 grams.
20. 1877, Furhs. Hypertrophy. Death in eighteen hours.
21. 1877, Simmons. Leucocythæmia. Death from hæmorrhage in two hours.
22. 1878, Czerny. Hypertrophy. Cure.
23. 1878, Czerny. Leucocythæmia. Death in a few hours. The spleen weighed 3,886 grams.
24. 1878, Volney Worscey. Hypertrophy. Death.
25. 1878, Arnison. Leucocythæmia. Death.
26. 1878, Geissel. Leucocythæmia. Death. The tumor weighed 4,500 grams.
27. 1878, Pranzolini. Hypertrophy. Cure.
28. 1878, Hayward. Leucocythæmia. Death.
29. 1878, Baker Brown. Leucocythæmia. Death.
30. 1878, Credé. Cyst. Cure. The tumor weighed 1,720 grams.

From the above table we find that extirpation of the spleen has resulted fatally in every case of leucocythæmia. Every patient succumbed, either during the operation or immediately thereafter. This operation is unjustifiable, as well from the results of practical experience as in theory. It is no more rational to remove a leucocythæmic spleen, than it would be to remove glands which were enlarged as the result of infection from some malignant growth, without extirpating the growth. These operations, however, were all performed as a desperate resort, and at a time when the patients no longer had the vigor to withstand a serious traumatism.

Leaving out case 1, which claims only historic interest, we learn from the remaining 29 cases that extirpation of the spleen has been successfully performd 6 times—twice for cysts of the spleen (cases 6, 30), four times in cases of hypertrophy (cases 14, 18, 22, 27).

CONCLUSIONS.

When, in consequence of a wound of this region, there is hernia of the spleen, the surgeon would be justified in excising the protruding portion. All the observations relating to this condition indicate the benignity of this procedure, and its uniform termination in recovery.

In disease of the spleen, its extirpation is contraindicated in the case of cancer or of symptomatic hypertrophy, either in relation to an affection of the liver or to an *intoxication poiudégenne*. The results of surgical interference have been universally deplorable.

Cysts of the spleen are curable by means of treatment more easy or less dangerous than extirpation.

In cases of wandering spleen the operation might be indicated if the symptoms were alarming. *En résumé*, it may be affirmed that splenotomy is practicable in the human subject without altering the condition of the health. This operation is indicated only very exceptionally. It is difficult to obtain a fortunate result, the chances being in favor of a rapid termination in death, due to hæmorrhage or to shock from the operation.

MEDICAL PROGRESS.

ANATOMY AND PHYSIOLOGY.

TRANSPOSITION OF THE VISCERA WITH DISLOCATION DOWNWARD OF THE LIVER.—Dr. Donald Fraser, in the *Glasgow Medical Journal*, gives the case of a middle-aged, single lady whom he had known professionally for many years without being aware that there existed in her case a complete transposition of the thoracic and abdominal viscera. The discovery of this fact was brought about in the treatment of a so-called bilious attack; tenderness and swelling of the abdomen on the left side, which was referred to the effects of a fall a month previous, led to a direct examination. A large, smooth, rounded swelling, which gave to the hand a feeling of solidity, occupied the lower half of the abdomen, lying chiefly on the left side. While it extended beyond the middle line, the greater part of it lay in the left iliac region, reaching into the hypogastric and left inguinal regions. The lower border was within an inch or so of the pubes, and the upper border was separated from the edge of the true ribs on the left side by an area of clear percussion which measured about three and a half inches. From its position and physical conditions it at first gave the impression of being a tumor of the left ovary. As its shape could be made out and the notch felt in the hypogastrinm, it was soon recognized to be the liver transposed, and dislocated downwards. Its consequent pressure on the external iliac produced a considerable œdematous swelling of the left foot and leg. A bandage and pad was so applied as to produce a continuous upward pressure on the lower surface of the liver, with the effect of, in about ten weeks, so far replacing the organ as to cause the tumor completely to disappear, the lower edge of the liver being felt underneath the edge of the left hypochondrium, with a complete subsidence of the œdema. In this case there was also effusion into the pleura at the base of the left lung, due no doubt to the dragging downwards of the diaphragm.

Further examination into the case showed a marked degree of lateral curvature of the spine, the convexity of the dorsal curvature being directed to the left. The patient was right-handed. The apex beat of the heart could be felt on the right side between the fifth and sixth ribs, at the distance of an inch and a half from the right edge of the sternum. The stomach occupied the right hypochondrium, and emitted a markedly tympanitic note. The splenic dullness could be detected on the right side.

DERMATOLOGY.

HERPES PROGENITALIS IN WOMEN.—Unna acted during four years as official examiner of public prostitutes in Hamburg. The number of these under strict surveillance is about 800, and about 25 per cent. of these suffer annually from herpes progenitalis. On the contrary, the disease is extremely rare in private practice in women. He ascribes the cause, in prostitutes, to excessive congestion of the genital organs, and believes that every herpetic eruption of the variety under consideration depends on a heightened congestion of the pelvic organs. There are men who are attacked by herpes after every act of coition, and there are prostitutes who have an eruption of herpes every time they menstruate; less frequently pregnancy and the puerperal state also induce the disposition to herpes progenitalis, which is readily explained on the same theory. It has been asserted, as a point of distinction, that pain never accompanies herpes progenitalis as it does herpes zoster. In Unna's experience, however, pain not only often accompanies the development of the exanthem, but usually precedes the eruption by one or two days. The eruption in men oftenest occurs on the second or third day, and not on the first day, after coition. He thinks compression of the nerves during penile erection may explain the pathogenesis of herpes progenitalis, much in the same way as, in Gerhardt's opinion, it accounts for the eruption of herpes labialis febrilis (*Jour. Cutaneous and Venereal Diseases*).—*Edinburgh Med. Jour.*

CASES OF THICKENED EPIDERMIS TREATED BY SALICYLIC PLASTER.—Dr. George Thin, at the Clinical Society of London, (*Lancet*), gave an account of cases of thickened epidermis, treated by salicylic gutta-percha plaster. The plaster which he used was manufactured by Herr Beiersdorff, of Hamburg, at the suggestion of Dr. Unna, who had introduced it into practice. He gave four cases.

CASE 1.—That of an adult man, in whom a tendency to extreme tylosis of the soles and palms was hereditary, being covered with an extremely thick and hard epidermis, and had been for many years in this condition, resisting very varied methods of treatment. Under the use of the salicylic plaster, which was kept constantly applied by means of bandages, and changed every third or fourth day, the hard layer of epidermis came off in one mass, leaving a delicate rose-colored epidermis behind it.

CASE 2.—A gentleman, aged 72, was unable to walk for seven months on account of an attack of sciatica. After its relief he resumed his active exercise, involving a good deal of walking on the hard pavement. The soles of both feet became hot and tender, and after a few weeks the skin of the ball of each foot became hard and horny. This lasted seven years, giving rise to much pain and discomfort. The salicylic plasters relieved the condition for several months at a time.

CASE 3.—A gentlemen, aged 43, palmar surface of right fore-finger covered for years by a thick, hard fissured epidermis. This morbid formation had been removed by the salicylic plaster, and the skin of the finger had remained normal when seen nine months later.

CASE 4.—A gentleman, aged 40, had suffered from the condition of his heels for about 20 years. It had begun by the skin being red, tender and scaly, and the hardness had gone on progres ively increasing. Amongst other methods of treatment which had been employed in vain, several antisyphilitic courses

were to be reckoned. When seen, the skin of both heels was covered by thick, hard, horny, uneven masses, which rendered walking very painful. By the use of the salicylic plaster the tendency to horny formation was not removed, yet the hard masses had been completely got rid of, and the fresh formation was avoided.

Dr. Thin regarded the condition of which these cases were examples as being essentially allied to eczema. The formative power of the epithelium was injured mechanically or otherwise, and an imperfectly formed epidermis resulted. By its solvent power on horny epidermis, salicylic acid incorporated with gutta-percha, freed the skin from an adherent, irritating mass, and the deeper layers of the rete mucosum were placed in more favorable conditions for regaining their physiological properties.

TARRY PREPARATIONS IN THE TREATMENT OF ECZEMA.—Nicale Anderson, in speaking of the use of tarry preparations, says that in many cases it is more appropriate to prescribe them in the form of ointments than of lotions, particularly when the parts feel stiff and rigid, and when there is a tendency to the formation of fissures. As a lotion he strongly advocates a mixture of equal parts of common tar, soft soap, and methylated spirits. Tarry lotions tend to discolor the parts to which they are applied and not uncommonly prove too stimulating, and then are apt to aggravate, instead of removing the eruption. The color can be rendered paler and the lotion diluted, and at the same time the combination is miscible with water, by mixing mineral tar and spirit in certain proportions and adding a little strong solution of ammonia.

℞ Picis mineralis ..... ℥ij
Sp. rectificati ..... ℥ij
Cola et adde.
Liquoris ammoniæ fort ..... m viij
Glycerine (Price) ..... ℥vj
Aquæ distillatæ ..... ℥xij

Such a mixture forms a yellowish emulsion with water in all proportions. It can be sponged on two or three times a day. Mr. Wheeler, of Ilfracombe, has informed Dr. Anderson that he has discovered that by the addition of laminaria saccharina, as prepared by him, to pix liquida, it is miscible with water in all proportions. Carbolic acid, best employed in solution, the strength varying with the degree of chronicity of the skin disease, removes at once the fœtid odor which often exhales from eczematous surfaces, counteracts the itching, and sometimes heals up the excoriations and ulcerations with remarkable rapidity. While emollient ointments, which depend almost entirely upon their oily ingredients for their beneficial effect, are best applied spread on rags, stimulating ones should, as a rule, be melted on the point of the finger and rubbed firmly into the affected part, and none should be allowed to lie undissolved upon the skin: nor, in most instances, should their color be perceptible after their application the surface should merely have the appearance of having been recently moistened. The part may occasionally be cleaned with white of egg and soft tepid water (rain water, if possible), for if layer after layer be smeared upon the skin it becomes rancid, acts as an irritant, and is calculated rather to be prejudicial than otherwise.—*Jour. Cutaneous and Venereal Diseases. Edin. Med. Jour.*

SALICYLIC ACID IN ECZEMA.—Lassar points out that salicylic acid is specially useful in eczema, and particularly when used as a two per cent. vaseline salve or vaseline zinc paste. In the common eczemas of the head in children, so numerous in dispensary practice, after two or three thorough cleansings, the daily application of the following salve nearly always suffices to obtain rapid and lasting results: ℞. acid salicylic, gr. 10; tinct. benz., m. xx.; vaseline, ℥j; m. ft. ung. On other parts, where a soft salve, which easily melts as this, is not suitable, where a firm dressing or a drying effect is desired, the following paste should be rubbed on: ℞. acid salicylic, gr. 19; vaseline, ℥j; zinci oxidi; amyli, ää ℥ss.; m. leniter terend., fiat pasta. So long as the secretion is abundant, the dressing should be daily renewed. Sometimes, when it dries hard, it tickles the skin; it should then be rendered soft by subsequent innunction with vaseline.—*Monatshefte für praktische Dermatologie* and *Ed. Med. Jour.*

RESORCIN IN A CASE OF EPHITHELIOMA.—Dr. Manino, in an article on resorcin, reports a case of epithelioma that he has treated with it. G. P., aged 64, had always enjoyed good health until about four years ago, when he noticed a small growth on his right cheek, about the size of a split pea, which caused a great deal of pain. Continued scalding caused an abrasion of the skin, and on the slightest irritation it would bleed. Cauterization and excision only caused the growth to enlarge to a size of ten centimeters in diameter. The wound had a dark red fungous appearance, with indurated edges, and gave off a profuse thin, watery discharge. An ointment of resorcin and vaseline, 1–3, was applied twice daily for eight days, when a marked change for the better could be seen; a portion of the wound was beginning to heal over. After two weeks the ointment was weakened a little, and the case continued to progress rapidly. In a short time the whole surface was bridged over, and only a red scar remained. The treatment was painless, and far more satisfactory than when caustics are used.—(*Zeitschrift f. Therap.*) *Therapeutic Gazette.*

HYGIENE.

DETERMINATION OF SALICYLIC ACID IN MILK.—The use of salicylic acid as a preservative of milk, cream, butter, and other articles of food, has now become somewhat general. This compound may or may not be an improper preservative. One would, on general principles, prefer to partake of an article preserved by means of salt, or sugar, than by salicylic acid, or boric acid, and similar drugs. It is sometimes desirable to ascertain the presence of salicylic acid in food, and for this purpose the process recently suggested by A. Remont, appears to be a good one. 20 cubic

centimeters of, say, milk are shaken up with 2 or 3 drops of sulphuric acid, when the clot which at first forms is broken up, 20 cc of sulphuric ether are gradually added, and the mixture agitated until the ether is partially emulsified. On standing for some time, 10 cc of the etherial solutions are poured off into a test tube, having a mark on it to measure that quantity. The ether evaporates and a fatty residue is obtained, which is boiled in spirit containing 40 per cent. of alcohol, and allowed to cool. The 10 cc solution now contains all the salicylic acid present in the same quantity of the milk. 5 cc are filtered into a burette, 0.015 meter in diameter, 2 or 3 drops of a 1 per cent. solution of ferric chloride are added. A rich violet color is produced, and is compared with the color produced in a liquid obtained by similar treatment from milk containing a known quantity of salicylic acid.—Dr Chas. Cameron, in *Dublin Journal of Medical Science.*

MATERIA MEDICA AND THERAPEUTICS.

Investigations into the Action of the Digitalis Group.—Drs. Sydney Ringer and Harrington Sainsbury detailed the result of their investigations into the actions of the digitalis group before a recent meeting of the Royal Medical and Chirurgical Society (*Lancet*). Digitalis is taken as the type of a group of drugs whose influence is exerted mainly on the circulatory system. The facts of chief importance in this action are: 1. The arrest of the heart in systole (if the dose be sufficiently large). 2. The raised blood-pressure which obtains throughout till close upon the final systolic arrest. Digitalis action upon the heart is defined as the production of continuous spasm of the heart-muscle by direct action of the drug on this tissue. This spasm must not be of the nature of a tetanus, *i. e.*, of a fusion of adjacent beats, and it may affect either the whole heart or a limited portion of the same. The digitalis group is thereby enlarged so as to comprehend the caustic alkalies and barium salts. Experiments were recorded of circulating these various drugs through the vessels of a tortoise, in which the brain and spinal cord had been destroyed, and simultaneously experiments were made on the excised heart of the frog. The summing up of these experiments gave for the digitalis group, which included strophanthus, dyak poison, convallarium, hydrate of potassium, carbonates of potassium and sodium, and barium chloride, 1. That a like action to digitalis obtains with them. 2. The local action on the heart serving as the definition of digitalis action. 3. Actual experiment verifies the inference that the action on the muscular tissue of the arterioles is similar. 4. So far as the experiments go, these drugs do not influence the caliber of the vessels indirectly through the nervous system. 5. Many of the digitalis group are notable muscle-poisons; the tissue of the heart, standing functionally midway between the striped and unstriped muscular tissues, may permit of the inference that a marked action of the drug on the tone of the heart would indicate a similar effect on the tone of the vessels, whereas a marked action on the cardiac beat would indicate like action on the skeletal muscles.

In the discussion which followed this paper, Dr. Lauder Brunton disapproved of grouping the cases together. If we were to group together all those substances which produced narrowing of the arterioles, we should have to include half the pharmacopœia; we should rather group only those the sum total of whose action was identical. The action of digitaline on the voluntary muscles varied not only with the species or genus, but with the individual; he did not consider it as a marked muscular poison, and did not think it wise to draw conclusions as to the action of these drugs on the skeletal muscles from their action on the involuntary muscles. Dr. John Harley, considering the fact that these experiments were made on dying animals, thought they could have no specific value as to the action of the drugs which had been used. It was not wise to argue from these experiments that such and such an action would follow on the administration of these drugs to healthy, warm-blooded animals under ordinary conditions of life. Dr. Ringer, in his final remarks, referred to digitaline, as a drug about the action of which there could not be much doubt—it strengthened the heart, it slowed the action, it regulated the beat, and it tightened the arteries. As regards its action on the heart-muscle, it was well known that, if applied locally to a bit of the muscle in which there were no ganglia, it caused contraction, thus showing that the pneumogastric nerve and ganglia were not concerned.

Kreochyle.—Kreochyle is a new preparation of meat, made at the suggestion of Prof. Barff, and intended as a dietetic remedy in cases of acute disease, vomiting of pregnancy, aggravated dyspepsia, infantile diarrhœa, and similar conditions. The following analysis has been made by Dr. North, lecturer on physiology at the Westminster Hospital:

	Grammes per litre.
Soluble albumin	35.125
Potash	14.19
Phosphoric Acid	2.016
Nitrogen, in the form of Kreatin, Kreatinin, etc.	2.4998
Chlorides	6.186

The residue of meat, after having been used for the preparation of kreochyle, consists of

	Per cent.
Soluble albumin	nil.
Phosphoric acid	.704
Potash	.181

Together with all the fat, fibrin and gelatine.

Kreochyle, therefore, is superior to beef tea, as it contains not only the extracts but a large amount of albumin. It is pleasant to the taste, and has proved valuable in the hands of many practitioners.—*Birmingham Medical Review.*

Sir Benjamin Brodies' Prescription for Gout.—℞ Pil. hydrargyri, ext. rhei, ext. colve. co., āā ℈j; ext. colchici acet. gr. xv. Ft. pil. xv. Sumantur tres hona somni pro re nata.—*Birmingham Medical Review.*

THE

Journal of American Medical Association.

PUBLISHED WEEKLY.

THE EDITOR of this JOURNAL would be glad to receive any items of general interest in regard to local events, or matters that it is desirable to call to the attention of the profession. Letters written for publication or containing items of information, should be accompanied by the writer's full name and address, although not necessarily to be published. All communications in regard to editorial work should be addressed to the Editor.

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AN ETHICAL SYMPOSIUM.—Being a series of Papers concerning Medical Ethics and Etiquette from the Liberal Standpoint.

THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION has just been honored with a copy of a small and neatly printed volume from the press of G. P. Putnam's Sons, New York, with the above title. The object of the volume is stated in the following paragraph from the preface: "The object of this little book, therefore, is to place before the reader the motives which induced a large number of medical men of the State of New York to dissent from some of the rules (meaning the National Code of Ethics), which had hitherto controlled and guided them in their intercourse with themselves and the public."

And the *motives* set forth in the book all converge into one, namely, to get rid of certain restrictions which existed in the National Code, chiefly with regard to consultations, which is clearly indicated in the following paragraph, also from the preface of the book:

"It had been long felt that the Code of Ethics which had obtained in the State of New York, was an instrument which, however good at the time it was framed, no longer met the needs of the medical profession in the State; that its restrictions, if complied with, were embarrassing and absurd, etc."

The leading motive that impelled the action of the Medical Society of the State of New York to abolish the National Code of Ethics, which had been and still is the Code of the American Medical Association and of nearly every State and local medical society in the United States, being conceded, there are three aspects in which the movement should be viewed by every thoughtful and true lover of his profession. The first relates to the origin of the National Code of Ethics, the sources of the authority to make it, the legitimate mode by which it may be either amended or abrogated, and the essentially disintegrating and anarchial tendency of the method adopted by the State Society of New York. The second relates to a candid and direct examination of the comparative merits and demerits of the Code adopted by the New York Society. Is it in any sense a more *liberal* Code, or does it simply change one standard of restriction for that of another? Does it better protect the interests of either the patient or his medical attendant, or does it place the latter entirely at the mercy of the consultant?

The third aspect relates to the legitimate tendencies of the New York movement, and the duty of the American Medical Association and of the State and local societies in the several States in relation thereto. At the risk of wearying some of our readers, we propose to discuss these several aspects of the general subject with some degree of care; but shall have time and space for only a brief consideration of first in the present number.

In compliance with an invitation from the Medical Society of the State of New York, a convention o delegates from the medical societies, colleges, hospitals, and other permanently organized medical institutions in all parts of the United States, assembled in the city of New York in the first week in May, 1846. This convention of representative members of the profession from every section of the country, after due deliberation, appointed able committees to prepare a plan for a permanent national organization; to consider the standard of preliminary education necessary before entering upon the study of medicine; to consider the subject of medical college education; to prepare a code of ethics for regulating professional intercourse and harmonizing the interests of the profession and the public; and to prepare a nomenclature of diseases. Having appointed committees on these several subjects, they were directed to report at an adjourned meeting of the convention in Philadelphia in May, 1847.

At the appointed time the convention re-assembled, embracing much fuller delegations from the medical societies and institutions in all parts of the country, and each of the several committees presented a well considered report. A majority of the Committee on the Plan for the Permanent Organization was composed of delegates directly from the New York State

Society, at the head of whom were John Stearns, John Watson and others, some of whom are still living; while the same society was represented on the committee to report a National Code of Ethics by one of the most eminent of all her members, Dr. Alonzo Clark. We call to remembrance these facts, simply to show that the New York State Medical Society had her full share of influence in framing and adopting both the Constitution and Code of Ethics of the National Association. The declaration of the convention in 1846 that it was "expedient for the medical profession of the United States to institute a National Medical Association" was cordially sustained by the votes of her delegates in that convention; as was also the second clause of the constitution, adopted by the adjourned convention in 1847, which declares that "the members of this institution (The National Association) shall *collectively* represent and have *cognizance* of the *common interests* of the *medical profession in every part of the United States.*"

It is thus seen that the New York Society entered fully into co-operation with the State societies and medical institutions of all the other States in forming the American Medical Association, and committing to it the control of the *common interests* of the whole profession, and especially in preparing and adopting a Code of Ethics which should be uniform in "every part" of the country. Having done this, and having continued such co-operation by annually appointing her full quota of delegates to the regular meetings of the national organization, she was bound by every principle of honor, nay, even by the most common sense of propriety, if she desired changes in the National Code of Ethics or the rules for regulating professional intercourse; to formulate such changes and request or instruct her delegates to present them in due form for the consideration of the National Association. Under the rules of that Association such presentation would necessarily have been received, printed in the minutes of the meeting for the information of all the members, and have come up under the rules at the next annual meeting for full consideration and final action in open meeting of the Association. Such a course would have been, not only in accordance with the rules of the national organization, to which had been committed this most important interest common to the whole profession, but it would have been equally consonant with the honor of the New York Society, and with the mutual relations she had entered into with her sister societies in the other States of the Union. That she did not take this course so plainly open to her, and so obviously in consonance with her obligations to the profession at large, is not only well known, but fully acknowledged in the "little book" before us, as the following quotation from the preface will show: "From past experience it was felt that it would be useless to present the matter to the American Medical Association for action, and it was decided that the change should be made by the State Medical Society."

What "past experience" is here alluded to? Had the New York Society or the society of any other State ever asked the National Association to alter a single paragraph of its Code of Ethics? Had any one of the eleven contributors to this book ever presented an amendment or alteration of the Code to the Association for its consideration and action? Is there anything on record in the past history of the Association indicating an unwillingness to listen to propositions for revising or amending the Code of Ethics. On the contrary, had not the Association actually had under consideration, in the very manner I have indicated, and finally adopted, an addition to the Code only the very year previous to the independent action of the New York Society? The answer to each of these questions is obvious; and the pretence of "past experience" is a mere afterthought, as unmanly as it is destitute of any foundation in the facts of history.

No subterfuge or pretense can cover up the naked fact that in the action of the New York Society abolishing the national Code and adopting a substitute of her own, she acted in total disregard for her obligations to the national organization she had helped to create, and in which she had at the time a full corps of delegates; in contempt for her sister societies in other States, which had become joint constituencies with her; and in disrespect for her own delegates. It is this disintegrating or disorganizing *method* of action adopted by the New York Society that is more objectionable than any other feature of her work. Should her example be followed by the profession of other States, two decades would not pass before the profession of our country would be back in the same social and ethical condition so graphically described by Dr. Drake half a century ago, as quoted by our Crawfordsville correspondent in the present number of the JOURNAL—see page 108.

OHIO STATE SANITARY ASSOCIATION.—The first meeting of this proposed State organization is to be held in the City Hall, Columbus, Ohio, on the 14th and 15th days of February, 1884, commencing at 10 A. M. The programme provides for a two days session and a permanent organization. A fair number of papers on important subjects are promised, and there

are ample assurances that the meeting will be well attended, and will exert an important influence on the future sanitary interests of that wealthy and populous State.

The following railroads will return delegates at the rate of one cent per mile, upon presentation to the ticket agents at Columbus of a certificate that they have paid full fare one way, signed by the Secretary of the Association:

Indiana, Bloomington & Western.

Columbus, Hocking Valley & Toledo.

Cleveland, Akron & Columbus.

Scioto Valley.

Cleveland, Columbus, Cincinnati & Indianapolis.

Ohio Central.

The following railroads will sell round trip tickets to all persons who will attend the meeting of the Association, at two cents per mile, upon presentation to the local ticket agent of a certificate furnished for that purpose:

Pittsburgh, Cincinnati & St. Louis or C. St. L. & P. R. R.

Baltimore & Ohio.

These certificates will be forwarded on application to R. Harvey Reed, Acting Secretary, Mansfield, Ohio.

A PROPOSED NATIONAL PHARMACOPŒIA.—In the House of Representatives, January 8, 1884, read twice, referred to the Committee on Ways and Means, and ordered to be printed, Mr. Randall introduced the following bill:

"A bill to prepare and publish a national pharmacopœia for the United States:

'Be it enacted by the Senate and House of Representative of the United States of America in Congress assembled, That the Secretary of the Treasury shall, as soon as practicable, detail two officers of the Marine Hospital service, and the Secretary of War shall detail two officers of the medical staff of the Army, and the Secretary of the Navy shall detail two officers of the medical staff of the Navy, for the duty of compiling and preparing a pharmacopœia, which shall be known as the "National Pharmacopœia of the United States of America," and shall be held and accepted as the standard for the purveying, compounding and dispensing of drugs or medicinal agents, and shall be taken as authority in the Treasury Department on all questions arising under the tariff laws of the United States with regard to the nomenclature, description and purity of drugs or remedial agents, and shall further be received in evidence in the United States courts. And the matters contained in the said pharmacopœia shall be free for use by all authors and commentators for the benefit of the medical and pharmaceutical professions and of the community at large; and it shall not be lawful for any one to reprint and publish the said pharmacopœia as a whole.

'SEC. 2. That the medical officers detailed as above provided shall invite the American Medical Association and the American Pharmaceutical Association, at their next annual meetings, to form committees of not more than three members from each of the said associations, which committees, if so appointed, may co-operate with the above-named medical officers in the preparation of the said pharmacopœia, forming a board which shall have power from time to time to add to its number as may in its judgment be necessary, and which shall elect a chairman and a secretary, and adopt such rules as it shall see fit for the expediting and perfecting of the said pharmacopœia, which, when completed, shall be printed under the supervision of the said board; and an edition of not less than 5,000 copies shall be printed for use in the several Departments of the Government of the United States; and copies may be furnished to private persons in accordance with the provisions of section 3,809 of the Revised Statutes.

'SEC. 3. That for the purpose of defraying the necessary expenses of preparing the said pharmacopœia the sum of $5,000 is hereby appropriated out of any moneys in the treasury not otherwise appropriated, and the same shall be disbursed under regulations to be prescribed by the Secretary of the Treasury.

'SEC. 4. That the said pharmacopœia shall be revised once in ten years, upon the plan embodied in this act.'"

The above bill, if it becomes a law, provides for the preparation and publication of a work of much importance, both to the medical departments of the public service and to the whole profession.

The method of supervision and preparation provided in the bill secures as much freedom from local and partisan influences, and imparts to it as much of a truly national character, as is possible, while the publication by the government removes it entirely from the field of financial strife or competition. We hope individual members of the profession in every State will use what influence they have with their representatives in Congress, promptly, in favor of the passage of the above bill.

THE ARCHIVES OF PEDRIATRICS.—We have received the first number of this new monthly medical journal, devoted entirely to the diseases of infants and children. It is published in Jersey City, under the direct editorship of William Perry Watson, A.M., M.D., and an able corps of assistants or collaborators in the principal cities of this country and some in Europe. The journal contains sixty-four pages of reading matter, occupied by original articles, clinical lectures, clinical memoranda, translations, and abstracts. It devotes no space to advertisements of any kind. We wish the new enterprise an abundant

success. Terms, three dollars per annum. Address *Archives of Pedriatrics*, Jersey City, New Jersey.

MEMORIAL MEETING.—The meeting of the Suffolk District Medical Society, Section for Clinical Medicine, Pathology and Hygiene, held Jan. 9, 1884, was made the occasion for appropriate tributes to the memory of the late Dr. Calvin Ellis, who was for many years one of the most distinguished physicians and medical teachers in Boston, and was an active member of the Society.

NEWS ITEMS.

EXTRACTS FROM FRENCH JOURNALS.—Mme. Lachapelle: In *Le Medecin Praticien* Dr. Verrier gives an extended sketch of this celebrated woman. He commences by asserting that nearly all of the laity, a great many midwives, and some physicians, believe that the name of a certain Mme. Lachapelle, who advertises in the journals of the day to cure sterility, indicates the midwife in charge of the Paris Maternité, who died in 1821, and left us as a legacy her memoirs in three volumes. Marie Louise Dugès, better known as the widow Lachapelle, was born in Paris, Jan. 1, 1769. Her father was a sanitary officer; her mother a midwife at Chatelet and at the Hotel Dieu. She married, in 1792, M. Lachapelle, surgeon in charge of the service at the Hospital St. Louis. He died in 1795, leaving her childless and devoted to her calling, which she had already practiced before marriage under the instructions of her mother, and which she continued at the Hotel Dieu during her married life. From this account the accommodations for the poorer classes, during and after confinement, in the hospitals of Paris at this time, must have been of the most crude and unsatisfactory character, and the instruction to midwives was confined almost entirely to theory. In consequence of the exertions and representations of Mme. Lachapelle, seconded by the medical faculty of Paris, in 1795 the Maternity hospital was established, and she was soon joined in her work there by Baudelocque. In the school for midwives, which was a part of the institution, Mme. Lachapelle gave two or three lectures a day, illustrating her subject by the use of the mannikin, and requiring a recitation from her pupils on the matter taught.

As a practitioner, Baudelocque has expressed his admiration of the facility with which her supple, delicate hand, always intelligently directed, surmounted all obstacles, and he took pleasure in confiding to her the care of difficult cases and watching her successful efforts.

In the same journal we note the following advertisement: Mlle. ——, maitresse sage-femme of the first class, professor libre d'accouchements for midwifery students, will take to board yonng girls from the country to direct them in their studies and at the clinics. She prepares them and renders them apt, after a year of work, to pass with success the examination for midwife of the first class before the Paris Faculty. Home life. Charges moderate. Absolute morality is required. In case of a recognized inaptitude, the pupil will be returned to her family after the first three months.

JEQUIRITY — ABRUS PRECATORIUS. — Dr. C. W. Tangeman gives, in the January number of the *Therapeutic Gazette*, a systematic and exhaustive consideration of this new remedy, which has been creating such a stir, especially among ophthalmologists, on account of its reputed efficacy in curing trachoma, or granular lids. Jequirity is the name of a plant belonging to the family of papilionaceæ. It is indigenous to India, South America and tropical Africa. Although other parts of the plant have medicinal properties, it is the seeds which have been used for the purpose indicated. These seeds are of two varieties, one being of a bright red, and the other of a pale yellow color. The bright red are the variety which has found most favor as an application to granular lids. The remedy was first employed scientifically by de Wecker, the famous Parisian ophthalmologist, who received the hint from a patient whom he had unsuccessfully treated, and who on his return to his home in Brazil subjected himself to the popular treatment, as it is known among the natives of that country. De Wecker, acting on the instructions furnished him, prepared an infusion by bruising the seed to a fine powder, and then adding the proper quantity of water and allowing it to macerate for twenty-four hours. This infusion applied to the conjunctiva possesses the peculiar property of exciting a specific inflammation which, in the majority of cases, is of a diphtheritic nature. After this jequiritic inflammation has subsided it is found that the trachomatous bodies have disappeared. It will thus be seen that the seeds have succeeded in establishing a substitutive inflammation, which, running its course, smothers or otherwise overcomes the depraved process to which the granulations are due.

Dr. Tangeman details a number of very interesting physiological experiments with the jequiritic infusion on the eyes of animals, from the results of which, conjoined with his observations of the therapeutic effects of the drug in the human subject, he formulates the following conclusions:

1. Generally speaking, and judging from the results usually obtained in the treatment of trachoma, the results are remarkably good and satisfactory.
2. In the large number of cases a purulent inflammation is not excited, but nevertheless the results are favorable.
3. The strength of the infusion influences the amount of the reaction.
4. An artificial inflammation can be set up any number of times by use of the infusion, which speaks against its being an infectious disease.
5. It acts on mucous membranes other than the conjunctiva.
6. It does not seem to be necessary to produce a purulent ophthalmia to bring about about absorption of the trachomatous process.
7. An involvement of the cornea can always be

prevented by a suspension of the applications and the use of a corrosive solution, 1 : 8000, two or three times a day.

8. The reaction is much more marked if a slight amount of irritation is made with a brush while applying the infusion to the lids, so as to cause an abrasion of the epithelium.

While the jequirity bean is undoubtedly an agent of great value in the treatment of granular lids, its use should be conducted with circumspection, and the patient should be closely watched by the physician. While cases are occasionally met with which are not benefited by this treatment, it is nevertheless very uniformly successful.

By a recent order issued by the Surgeon General U. S. A., Dr. J. S. Billings has been placed in charge of the Medical Museum and Library, thus consolidating the two. While remembering his successful efforts to make the library what it has become, as the medical library of the world, and the use he has made of its material by giving to the medical profession of the world the Index Catalogue, it is fair to presume that in this new field for his labor he will find the opportunity for utilizing to the best advantage the treasures now put under his control. Now that we are at peace with all mankind, save a poor handful of red men, and the army has been correspondingly reduced in size, it is not probable that pathological specimens will find their way in any quantity to the museum cases, but there are other fields remaining to be worked that would add to the usefulness of such a museum. With the many valuable specimens in our museums of comparative anatomy, there is but little to illustrate comparative physiology—that is, to illustrate the functional development of organs and viscera, from the lower to the higher types of animals, to reach their final, not perfection, perhaps, but completion, for our studies in man. The valuable models of Auzon and his followers, and the various instruments used in research, diagnosis, and the relief of disease, would all find a place in an ideal museum.

Dr. Rochard, Medical Director of the French Marine, who some weeks since received, at the hands of a lunatic, a gunshot wound of the lung, which for some time caused grave apprehensions, has since made an uninterrupted recovery, so that he was enabled, at the last meeting of the Académié de Médicine, to thank his colleagues personally for the great interest they had taken in his progress, and to inform them that he had so completely recovered that "all that remained to him of this adventure was a small piece of lead in the right lung, and great gratitude in his heart."

The editors of the *Archives of Medicine* with the December number announce a discontinuance of the journal, after a satisfactory existence of five years. The suspension is rendered necessary, not from lack of support by contributors or subscribers, but through a combination of extraneous circumstances.

SOCIETY PROCEEDINGS.

CHICAGO MEDICAL SOCIETY.

At the meeting of this society on the evening of January 7, 1884, Dr. J. G. Kiernan read a paper on "Perverted Sexual Instinct." Upon this topic the literature of the past was reviewed to a considerable extent by the writer, of which the following extracts have been taken, a part of the phraseology not being in very common use: Casper was the first to call attention to the condition known as sexual perversion, but not until several works had been published by a Hanoverian lawyer, Ulrichs, himself a sufferer from the disease, did the matter become the subject of scientific study on the part of physicians. Westphal was the first to discuss it, and described two cases, one, a female whose history, when a child, is said, to have been fond of boys' games and the putting on of male attire. From her eighth year she had felt drawn to certain girls and liked to express her love for them, kiss them, and induce them to let her touch their genitals. She came of a neurotic ancestry, and displayed somatic signs of degeneration. She had imperative conceptions, and displayed symptoms of insanity other than the perversion. His second case was a male, who felt attracted by males. Servals reported a case, that of a male, who in addition to sexual perversion was morally imbecile. Schminke and Scholz have reported cases in males. Westphal, in addition to the two cases *above* cited, has later reported an additional male case. Krafft Ebing, after citing four cases (all males), concludes, that the main symptoms of the condition are first congenital absence of normal sexual feeling and at times repugnance to normal intercourse, although they appear sexually developed normally.

The sexual psychical phenomena are replaced by this perversion. Sexual desire appears early and extends to the same sex, or at most the feeling finds expression in mutual onanism, but as a rule pæderasty is repugnant. Tamassia and Legrand du Saulle have reported one case each, both males. Stork reports three cases, one displaying primary monomaniacal tendencies. Raggi has reported a case of what he calls sexual perversion in a male, who, from having enlarged breasts, created the delusion that he was a woman. Charcot and Mognan have reported one case. In this country five contributions have been made to this subject. One by Dr. H—— (see anonymous contribution New York *Medical Record*, April 18, 1881), who describes the case of a male; one by Spitzka, who deals with a historical case; one by Blumer, who describes in a very thorough manner the case of a male in whom the perversion had very Platonic manifestations (a kind of love of which Plato was a great expounder); Shaw and Ferris reported one case which, however, was not well observed; and one case by Wise who describes the Lesbian loves (from Lesbos, an old Greek city) of two victims of this perversion. The author has seen three cases, two of which were impure, the other, a female, aged twenty-two, whom he describes as being of

neurotic ancestry on the paternal side, her cranium and face being asymmetrical. The patient has always had a fondness to dress in male attire, and she feels at times sexually attracted by some of her female friends, with whom she has indulged in mutual masturbation. These feelings come at regular periods, and are then powerfully excited by the sight of the female genitals. In the interval she manifests repugnance to attentions from men. She is aware of the fact that while her lascivious dreams and thoughts are excited by females, those of her female friends are excited by males. She regards her feelings as morbid. At times she is troubled by imperative conceptions, such as that if she turn her head around she will break her neck, in consequence she carries her head in a very constrained position.

Regarding the cause, excluding the impure cases of Ulrich's, Dr. Kiernan stated that thus far there have been 27 cases reported, *four females, the rest males*, which would seem to appear that sex predisposed to the affection, but it should be remembered that a history of female sexual desire is not easily obtained, that in nearly every case a neurotic ancestral history was obtained, and that the condition then appeared to be congenital

Treatment.—To remove this perversion is out of the question. Dr. Wise has recommended that all such cases be sent to an asylum. Krafft Ebing proposed that these patients be exempt from legal penalties, and allowed to follow their inclinations when harmless, and when not violating public modesty.

The case recited by the author, he treated as if it were one of nymphomania, and by antaphrodisiac measures he sought to strengthen the patient's will, and at the same time by instituting a course of intellectual training. The patient has been aided by these means so far as to be able to control her perverse inclinations.

Dr. E. Andrews discussed the paper by saying, cases of this kind occurring to people living in cities situated in the southern half of Europe are not regarded as cases of insanity, and in Italy many boys open a vicious trade to travelers, which, no doubt, is due to corrupt associations there. Among the Latins, and Greeks, and people living along the Mediterranean Sea, vicious habits of all sorts were practiced 200 years ago, according to some works on ancient literature. In a certain saloon-parlor in Paris, there is exhibited a fine large picture of a nude figure to represent a hermaphrodite, for certain kinds of lascivious purposes, and both sexes view it. Prostitutes frequently are known to be affected with chancroids on the verge of the anus, and the men frequenting the place often contract specific disease in the mouth.

Dr. R. E. Starkweather inquired of the essayist if he considered the cases that the newspapers had published so much recently about, occurring in Wisconsin, a mutual or mental disease? Both the persons are said to be females, and the latest report states that one is pregnant.

Dr. Kiernan thinks there is scarcely a civilized nation in which the vice is not practiced; and this vice aspect is common in Asia, also in Naples.

Among the Pueblo Indians, one of their number is delegated as a pæderast. He, however, thinks these cases should be divided into two classes, one of which are vicious, the other perverted. Regarding the last speaker's interrogatory, Dr. K. thinks we can reject the pregnancy part of the question; and then, too, in the case he alludes to we are not assured that both are women, for the scrotum of a man may be adjusted so as to elude detection, and other things being equal, a male person may dress in female clothing and readily pass as such.

Dr. Charles E. Webster read a well prepared paper on Pott's Disease, and exhibited a mechanical appliance of his own invention, that he had manufactured for the relief and cure of dorsal caries. The apparatus was examined by the gentlemen, and many of them endorsed it as being superior to the jury-mast and head-lift, it being far less cumbersome than the former, which is apparently always in the way. The paper is an original contribution, and differs somewhat from the literature upon this subject. A description of the apparatus and mode of application which has been prepared by our reporter we omit here, as the paper in full is contained in another part of this number of the JOURNAL. L. H. M.

IOWA CENTRAL MEDICAL ASSOCIATION.

The Iowa Central Medical Association met at the parlors of the Tremont House, January 8, 1884. The President, Dr. H. L. Getz, called the meeting to order. After reading the minutes of previous meeting, the regular order of business was proceeded with.

This being the annual meeting, the following officers were elected for the ensuing year: President, Dr. Chas. Reiterman; Vice President, Dr. Wm. B. Kibbey; Secretary and Treasurer, Dr. Harriet Conniff; Censors, Dr. H. L. Getz, Dr. James Lang, and Dr. Rosa Tysson.

The retiring President, Dr. Getz, now delivered the annual address, his subject being "Medical Issues of the Day," wherein he sharply criticised the *reasons* given for change of code by the New York Medical Society, and yet urging leniency and liberality on the part of the profession in the construction placed upon it, where consultations were required in out of the way places and in localities where competent physicians or surgeons could not be induced to locate. He also pointed out the gross inconsistency in the pretended consultations between regular and homœopathic physicians. The doctor advocated and hoped that he might see added to article 1, section 3, of the present Code, a clause not only *permitting* a physician to give on his card the name of medical college at which he graduated, the city in which it is located, and the date of his or her graduation, but that it would be made as *obligatory* to do so. His reason for advocating this addition to the present Code being that it would, first, enable the public to select intelligently a competent, or at least a properly qualified physician; second, by doing this it not only protects the general public from imposition, but it likewise protects the physician who has spent his means and time in properly qualifying himself for his pro-

fession from *theft* on the part of the unqualified, or those who *claim* to have obtained regularly the degree of Doctor of Medicine and Surgery; third, that this change of Code can be easily made by the profession, and since desirable medical legislation is so difficult to obtain, the proposed change of Code would, to a great degree, take the place of desired medical laws; fourth, that the change advocated would be the cause of persons entering the profession obtaining their degree only from the best medical colleges, consequently do much toward a "so much talked about but so little accomplished" higher medical education. Other important and interesting questions were discussed.

The newly elected President, Dr. Reiterman, after a few well chosen remarks, now took the President's chair.

Dr. Getz reported the following cases of interest:

Case 1. Woman; married; aged 35 years. Cystic degeneration of kidney; cyst weighing about seven pounds successfully removed by abdominal section similar to ovariotomy.

Case 2.—Male; aged about 30 years; cut throat with large pocket knife, severing all tissues from one carotid artery to the other; severing the trachea completely, and the œsophagus about one-half; liquids taken by mouth escaped through cut on throat. The trachea and all parts were carefully approximated by deep and superficial sutures, and the patient nourished by liquid food injected into the stomach through tubes. Recovery has been steady and satisfactory, the patient now, just one month since the injury, being able to take liquids and solids in the usual way with little or no inconvenience.

Case 3.—Woman; aged about 25 years; pelvic cellulitis followed by abscess and complicated by hæmatocele; operation indicated and done; evacuating by trocar; patient recovering.

Case 4.—Railroad injury; caused by hand-car running over body; fracture (comminuted) of leg, and sustaining severe injury to spine, causing paralysis of the bladder and bowels; the latter are slightly improving; the former continues paralyzed; injury sustained six weeks ago; leg is doing well.

Other cases of interest were reported by Drs. Long, Conniff, Reiterman and Kibbey, after which the meeting adjourned.

THE MICHIGAN STATE BOARD OF HEALTH.

[Reported for the JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION.]

The regular quarterly meeting of the Michigan State Board of Health was held in the office of the Board at Lansing, Michigan, Jan. 8, 1884, the following members being present: Jno. Avery, M.D., of Greenville, President; J. H. Kellogg, M.D., of Battle Creek; Victor C. Vaughan, M.D., of Ann Arbor; C. V. Tyler, M.D., of Bay City; and Henry B. Baker, M.D., Secretary.

The recommendations to the Warden of the State House of Correction, by Dr. Jno. Avery, Committee on Buildings, Ventilation, etc., under date of Sept. 7, 1883, for improving the ventilation of the shops at the State House of Correction, at Ionia, were ordered printed in the next Annual Report.

The Secretary read a resumé of recent work of other boards of health; also, a summary of the work of the office of this Board during the last quarter, which showed that a successful sanitary convention had been held at Ionia; that partial arrangements had been made for holding one at Hillsdale; that the proceedings of the Muskegon, Pontiac and Reed City Conventions had been printed; that special meetings of the Board had been called at the State Reform School to examine plans for a new building; at Detroit to attend American Public Health Association; and at Ionia at the time of the convention; that a leaflet on contagious diseases had been translated into French, Danish-Norwegian and Swedish for general distribution among citizens of Michigan who speak those languages; that a very general distribution of circulars on communicable diseases and on the work of health officers had been made to the health officers of cities, villages and townships in Michigan; that similar documents were distributed at Ionia, and at the State Teachers' Association; that circulars, blanks, etc., had been sent to health officers and clerks of all cities, villages and townships in Michigan for their annual report, including that of the diseases dangerous to the public health; that notice had been sent to health authorities in several parts of the State warning of the shipment of diseased cattle into such localities; that the regular distribution of weekly bulletins of sickness and of meteorology, the yearly distribution of material for meteorological reports, and the quarterly distribution of blanks to observers of diseases, had been made.

The Secretary presented reports from Dr. Hazlewood, who as committee of the Board attended the Sanitary Convention at London, Ontario, and the meeting of the Board of Corrections and Charities at East Saginaw. In connection with the first report, Dr. Hazlewood described the water supply of that city (London), and the Secretary, who also attended the convention, described a visit to the Asylum for the Insane near London, Ontario.

By request of the State Board of Corrections and Charities, committees were appointed to examine and report on the sanitary condition of the jails, asylums, etc., in several counties in Michigan.

Drs. Avery and Kellogg were appointed a committee to investigate and report at next regular meeting on the sewerage, ventilation, etc., of the Capitol building.

A committee, consisting of Drs. Baker, Kellogg and Vaughan, were appointed to examine and report on the sanitary condition of the State Reform School and surroundings.

Dr. Kellogg presented and read portions of a very interesting report on the present knowledge respecting diphtheria, which will be published in the next Annual Report.

Considerable discussion occurred over the examination of text-books on physiology and hygiene, with reference to alcohol and other narcotics.

Only four books had been presented for examina-

tion. The committee reported relative to these books, and asked to be discharged, but the committee was continued, Professor Vaughan added to it. It was directed to confer with a similar committee from the State Board of Education, and it is to report again at the next regular meeting of the Board, April 8. It is hoped that publishers of school books will give early attention to this subject, and that more than one book can be approved at that time.

STATE OF MICHIGAN,
ATTORNEY-GENERAL'S OFFICE,
LANSING, Jan. 9, 1884.

HENRY B. BAKER, M.D., Secretary State Board of Health.

Dear Sir:—Yours relative to the proper construction of Act 167, laws 1883, entitled, "An Act to Promote Public Health," and inquiring whether physicians could lawfully register after the time fixed by Statute for the registration of physicians, is at at hand, and in reply would say, that physicians *can lawfully register at any time.*

The Act, after declaring the necessary qualifications for the practice of medicine in the State, required that persons so qualified should, within three months after the law took effect, file with the county clerk the statement therein set forth.

The three months after the law took effect, as specified in the Statute, was simply a limitation of time beyond which no person could lawfully practice medicine without being registered.

The person who failed to register within that time, but practiced as a physician, made himself liable to the penalties prescribed in the Act, and is also barred by Sec. 4 of the Act from recovering pay for professional services rendered subsequent to the time when he should have registered, and prior to the time of his compliance with the law. A removal to another county would necessitate a new registration.

Yours, truly,
J. J. VAN RIPER,
Attorney-General.

CHICAGO SOCIETY OF OPHTHALMOLOGY.

The Chicago Society of Ophthalmology and Otology held its third bi-monthly meeting on Dec. 18, 1883, the President, Dr. F. C. Hotz in the chair.

Drs. Z. Bettman, G. F. Hawley, H. Gradle and C. B. Shotwell were elected to membership.

Dr. Hotz then addressed the Society on Medicated Bougies for the Lachrymal Sac and Nasal Ducts..

The means usually adopted for the treatment of diseases invading these parts, are the employment of probes and syringe. The action of the probe is a mere mechanical one, to open the passages for the outlet of tears. The syringe, on the other hand, serves the double purpose of cleansing the tract and of introducing medicaments which are to act on the diseased mucous membrane.

A number of remedies are excluded from use if applied according to the latter method, on account of their insolubility in water, as bismuth, iodoform and boracic acid. The objectionable feature of nitrate of silver, when used in the fluid state, is the annoyance caused to patients by its staining qualities. A quantity of the fluid remedies, when injected into the sac, invariably bathe the conjunctiva, producing an unnecessary irritation. Furthermore, the action of fluid medicines is naturally of short duration for they flow rapidly through the nose.

The good results of medicated bougies was observed when introduced in other channels lined by a mucous-membrane. The thought of using them in the nasal duct, and thus combining the effects of probe and syringe, presented itself to the doctor.

Mr. Wadleigh, of the Western Suppository Co., 91 Washington St., Chicago, succeeded in manufacturing an article which has proved entirely satisfactory. The bougies are three inches long, and of the caliber of a Bowman's probe No. 6, tapering off toward the one end to the size of No. 2. It is not necessary to employ larger sizes, since they swell in warm water to a thickness corresponding to Bowman's probe No. 8. They are quite firm and elastic. The ingredients entering into their composition are, gelatine, in which are incorporated various remedies.

The following formulæ have thus far been prepared:

A. Iodoform $^1/_8$ gr. B. Boracic acid $^1/_4$ gr. C. Fluid ext. calendula $^1/_8$ gr. D. Carbolic acid $^1/_{32}$ gr., sulphate zinc $^1/_{16}$ gr. E. Subnitrate of bismuth $^1/_4$ gr.

It is introduced in the ordinary manner, with great facility and without pain. It adapts itself by virtue of its power of elasticity to the sinuosities of the passage where it is allowed to remain.

If the bougie is too long, the piece protruding may be clipped off with a pair of scissors. The medicated probe can also be cut in two before introduction, and either end inserted, according to the exigencies of the case. Several hours are reqnired for the complete dissolution of the bougie. In case of extensive strictures, Bowman's probe may precede the introduction of the bougie.

Dr. Hotz closed his remarks by saying that he had used this means of medication in but a limited number of cases with success, and asked the members to give it a fair trial. Its application in a great number of cases will decide whether it is to occupy a prominent position amongst the methods employed for the treatment of affections of the lachrymal passages. Several of the members had used the bougies, and agreed with Dr. Hotz as to the ease with which they were inserted, and as to their efficiency.

A paper on Pulsating Exophthalmus was read by Dr. Boerne Bettman. The three most important symptoms to be noted in connection with this disease are exophthalmus, the development of noises in the orbit and over a larger or smaller part of the cranium, and pulsation of the eye. This complex of symptons is produced by pathological processes existing either in the orbit or cranium.

In the following case the cause of the trouble was intracranial, an aneurisma arterioso venosum, produced by a fracture of the base of the skull. Mr. F., æt. 23, of Albuquerque, N. M., was attacked by robbers on the night of June 29, 1881. He was struck with a sand bag on the neck and back of the head and knocked down senseless. Friends found him in this state, bleeding profusely from the nose. He re-

gained consciousness several hours after the assault, when he complained of severe pains in the neck and head; during the night he vomited frequently and bled copiously from the nose. Pains in the head and left eye increased in severity, to be accompanied by the most annoying of all symptoms—a continuous hammering and buzzing in the head and ears, similar to the puffing of a steam engine. The next morning on awakening he noticed several other unpleasant features. Strabismus convergence with consequent diplopia, and exophthalmus of the left eye. Patient was confined to bed five weeks. During this time he complained of severe tension of the left eye, and of pain in this organ and in the head. Pulsation and exophthalmus increased. The diplopia disappeared after nine months, when the veins on his forehead began to swell. The vision of the left eye gradually diminished. Fifteen months after the injury a protrusion of the right eye was first noticed. Mr. F. was subjected to various methods of treatment. Electricity was for a long time applied, his complaint being diagnosed in a neighboring western city as morbus baso. The following state of affairs was found when he presented himself for examination in Chicago, September 7, 1883:

Marked exophthalmus, both eyes; left eye protrudes seven-eighths of an inch beyond the anterior orbital plane; right eye three-fourths of an inch. Conjunctiva bulbi oc. w. very much swollen; especially marked are the enlarged, tortuous, dark red blood-vessels; cornea clear; pupils normal in size; irides blue, react promptly. The prominent eye-balls can be pushed back into their sockets with ease. When the pressure is discontinued they assume their former position. Of great interest is the pulsation, which can be easily detected by the finger, which is lifted rhythmically; it is also visible to the eye. Above and to the inner side of both eyes, extending to the root of the nose, are two oval tumors somewhat larger than a hazel nut. The right one is divided into three parts by the ligamentum palpebrale mediale. A distinct purr fremissement schwirren is felt in the larger part of the right tumor; its pulsation and that of the eye are synchronous with the radial pulse. Auscultation over the head and eyes demonstrates a constant murmur, which becomes louder during the arterial pulsation. This systolic murmur can be traced along the carotis communis of the left side. Compression of the left carotid artery produces a complete cessation of the pulsation and noises on both sides; the exophthalmus is seemingly reduced somewhat. Compression of the right carotid does not affect these symptoms in the least. Strabismus convergence l. eye.

L. E. V. $= {}^{6}/_{70} +$ 2 letters of the next line.

R. E. V. $= {}^{6}/_{6}$ glasses do not improve.

Ophthalmoscopic examination.—Both sides papillitic. The veins are enlarged to double their size, and are extremely tortuous. The retinal arteries are exceedingly thin.

The constant pressure of the blood in the enlarged veins has worn deep furrows in the frontal bone. Dr. Baxter was called in as surgeon. It was decided to ligate the common carotid, since the patient endured digital compression of that artery admirably well. Dr. Baxter performed the operation at the Michael Reese Hospital, September 15, in the presence of a number of physicians. A No. 2 catgut ligature was placed around the vessel, below the omohyoid muscle. Pulsation and noises, subjective as well as objective, disappeared instantly. The eyes receded, the tumors collapsed. The patient rallied rapidly. On the 16th he had slight fever. 37. The temperature was normal the next day. He left bed and took a walk in the garden on the 20th of September. The wound healed per primam. On the night of the 26th, 12½ days after the operation, he was awakened by a sudden, loud hammering and puffing noise in the head and ears. An examination, made on the following morning, proved conclusively that circulation through the artery had been reëstablished, producing a return of all the unpleasant symptoms.

Dr. Baxter tied the artery again October 17, low down in the neck. As before, pulsation and noises ceased immediately; narcosis lasted longer this time; the pupils were dilated and did not respond to light; the right angle of the mouth was drawn upwards. These phenomena disappeared before he awakened. During the process of healing a small abscess formed (in the lower part of the wound), which discharged on the thirteenth. The wound then healed rapidly. The pulsation reappeared in a slight degree during the latter part of his abode in the hospital, but only after physical exertion. On November 5 he departed for his home, much improved; he is to return in March to have a similar operation performed on the other side. The pathological anatomy and therapeutics were then discussed. This disease is extremely rare; the most noted surgeons have not been fortunate enough to observe a single case during their many years' experience. In four cases of pulsating exophthalmus, a rupture of the carotis interna in the sinus cavernosus could be demonstrated without a doubt. Closer observation of all cases recorded, of which there are 106, will show that the majority owe their origin to such an injury. Several methods of cure have been proposed. Digital compression, injection of medicines in the pulsating growths and ligation of the common carotid artery. The latter plan is the oldest and most successful. Of fifty-six cases operated for rupture of the internal carotid in the sinus cavernosus 37, equal to 66.7 per cent., were cured; 11, equal to 19 per cent., remained unimproved; 8, equal to 14.29 per cent., died.

The interesting features of the case were then commented upon. Of special importance was the complete relapse twelve days and a half after the operation, at a time when the wound had healed completely and the patient was preparing to return home. Sattler mentions instances of the reappearance of the pulsation and noises in from one-half to two hours after the operation. In Herpin's case a relapse occurred after nine months. The recurrence of the trouble in the cases referred to was certainly due to reëstablishment of circulation in the aneurism through the widened anastomosing vessels from the opposite side, whilst in the case discussed the ap-

parently well ligated artery allowing the blood to take its former course.

During the first operation doubt was expressed as to the durability of a catgut ligature, as to its power of withstanding the action of the tissue fluids long enough to enable a thrombus to form.

Dr. Baxter quieted these fears by the following remarks: "During my long experience as surgeon to the Cook County Hospital, I never applied silk ligatures, but always used catgut, and never knew it to give way if tied sufficiently firm. Neither were the catgut ligatures destroyed by absorption before the eighth or twelfth day, and it does not require a longer time than this for the formation of a thrombus." After proving by a critical analysis of the clinical history that neither a thrombus had formed nor an extensive rupture of the interna and muscularis had followed the application of the ligature, the following conclusions were arrived at:

The artery had never been completely closed. Catgut is comparatively stiff and cannot be drawn together so tightly as silk. A thin, perhaps, thread-like stream of blood constantly flowed through the vessel, the pressure of the blood current, assisted by the process of absorption, gradually weakened the ligature, until at last it suddenly gave way.

A question of importance which arose during the second operation was the justifiableness of again employing catgut as a ligature, in the face of the first mishap.

An occurrence which often threatens the life of patients after an operation is secondary hæmorrhage. This peril, according to the essayist, is increased by the use of a silk ligature, provided a thrombus does not form or does not possess sufficient power of resistence, for silk usually cuts through the arterial coats. In view of a contravention of this statement, that such a possibility does not exist, since a thrombus capable of withstanding any pressure usually forms before silk could produce such an action, a case was cited of fatal secondary hæmorrhage, occurring 35 days after the operation, when the wound had healed perfectly. An autopsy revealed a necrotic degeneration of the interna and muscularis, and two non-obturating thrombi below the place of ligation. In order to avoid secondary hæmorrhage, Sattler says: "It is of great importance, when isolating the artery, not to tear more of the arterial sheath than is absolutely necessary to apply a ligature. In this manner the danger of necrosis of the artery is avoided. The danger of hæmorrhage is furthermore diminished by closely following the laws of antisepsis and employing a carbolized catgut ligature." If a No. 3 catgut ligature be applied double, or two adjoin each other, we secure the best chances for the healing of the wound per primam and avoid the danger of secondary hæmorrhage. BŒRNE BETTMAN, M.D., Secretary.

THE PROPOSED SIMS MONUMENT.—A committee has been formed, representing the profession in various parts of the country, to obtain funds for the erection of a monument to the late Dr. Sims in New York. Dr. Fordyce Barker is the chairman, and Dr. George F. Shrady is secretary.

BOOK REVIEWS.

A PRACTICAL TREATISE ON MATERIA MEDICA AND THERAPEUTICS. By ROBERTS BARTHOLOW, M.A., M.D., LL.D. Fifth edition. Publisher, D. Appleton & Co., 1884.

This is deservedly one of the most popular works upon this subject that the profession has. Prof. Bartholow's style is clear and pleasing. He is known to be an authority upon the matters treated. He gives with assurance his own views, and the practitioner can at once tell what has been used with benefit by the author.

The new edition is somewhat enlarged and has been thoroughly revised, so that it now agrees with the new pharmacopœia.

The work from its first appearance has been so popular and so widely read that an extended notice in regard to its scope and methods would now be superfluous.

DOMESTIC CORRESPONDENCE.

"BAKING POWDER."

FOR THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION.

Mr. Editor:—I send you the following comments on a very common but important subject, and hope they will attract attention:

There have been many newspaper wars pending about this article, but they have not at all enlightened the public on the subject. Dr. Hammond, of New York City, waged a war against the old time institution of the "country pie," demonstrating its indigestibility, and its consequent bad effect on the stomach; and I cannot understand why some medical authority has not agitated the baking powder question, and explained to the public its injurious effects, about which there is no doubt. To make the matter clear, it may be stated that the average baking powder is composed of bi-carbonate of soda, cream tartar, and starch, with a possible admixture of other things. The continued use of even this purest baking powder will affect the system seriously, commencing with only a slight derangement of the digestive organs, which gradually becomes chronic, changing the secretions of the stomach necessary for digestion (muriatic acid), in fact, altering the whole chemistry of the human stomach.

The continued use of alkalies in any form injures the health. Look at the alkali country west of us, where the alkali is found in the *drinking water*. The same dangers will arise from the persistent alkaline medication of our *daily bread*. The various forms of dyspepsia, bladder troubles, Bright's Disease, consumption—the newest researches speak about a wrong proportion of the alkalies in this disease—are only too often caused by this modern substitute for the old time-honored, common sense practice of using yeast.

It is a well known fact that the American nation is dyspeptically inclined, and that the New England race especially has physically deteriorated since bak-

ing powder is so generally used. The amount of baking powder made every year is enormous.

YEAST.

ST. PAUL, MINN., Jan. 7, 1884.

CRAWFORDSVILLE, Ind., Jan. 15, 1884.

EDITOR JOURNAL OF THE AMERICAN MEDICAL ASSOCIAION:

In my letter, so kindly published in your issue of January 5, an unimportant error crept in, where you say "his coat" instead of "*the cord*," in the sentence "The doctor pulled his coat off."

In reading *The Western Journal of Medicine and Surgery*, of March 1, 1847, edited by Drs. Daniel Drake, L. P. Yandell, and T. W. Colescott, I was interested to see what was expected of our Association as set forth in the following extracts: "Provided its members shall consult together with a fixed determination not to part till they have laid the foundation of an American profession. It is quite time that this was at least attempted. At present there is as little intercourse and sympathy between the physicians of the different States of the *Union*, so-called, as between those of the different kingdoms of Europe. All this is wrong, and should, if possible, be corrected. The medical profession is one throughout the world, and especially should its members, in the same confederacy of States, compose one brotherhood. As a means of promoting this interesting object, and, at the same time, giving an impulse to medical inquiry and improvement, it is to be hoped that the convention will not adjourn without taking measures to bring about, in some central city, a yearly meeting of physicians, surgeons, obstetricians, druggists, and dentists, open to all who legitimately belong to these respective departments of the profession. Such meetings could not fail to call forth many valuable papers and reports of committees, the reading and discussion of which would be a source of both pleasure and improvement; while our physicians generally would acquire a new impulse to observation and experimental research, and the publications of the association would elevate the character of our profession. Our readers will recollect that the meeting in Philadelphia will be an adjournment of that held in New York in the month of May, 1846. The minutes of that meeting are now before us, and we observe that several committees were appointed to make reports on the organization of a national association; on the primary education of students of medicine; on a higher standard of graduation; on State boards of examiners for the degree of M.D., instead of its being done by the professors; finally, on a uniform system of medical ethics. All those are important topics, which it is hoped the committees will thoroughly investigate."

In the June number I find: "The convention before adjourning resolved itself into an association, to be called the American Medical Association, and Prof. Chapman, being presented as its President, said he was greatly impressed with the honor conferred upon him, and unable to express in adequate terms the feelings which then animated his breast. It had been his good fortune, in the course of his long life, sometimes to have been complimented in the same manner, though not in the same degree. He confessed his incompetency to serve them in conformity with his wishes. He loved his profession, and should be very ungrateful did he not. Whatever he possessed in this life of any value had been bestowed by her great favors. Whenever he deserted her or any of her disciples, might Almighty God desert him! It would always be his aim to promote as far as he could the principles of the science, and do everything in his power to elevate still higher the medical profession." Yours,

T. F. LEECH, M.D.

STATE MEDICINE.

MEETING OF THE ILLINOIS STATE BOARD OF HEALTH.

We copy the following special report from the *Daily Times* of this city:

SPRINGFIELD, Ill., Jan. 18.—The State Board of Health is holding its annual meeting for the election of officers and other business, in its rooms, in the Dapitol building. There are present Newton Bateman, of Galesburg; R. Ludlam, of Chicago; A. L. Clark, of Elgin; W. A. Haskell, of Alton; W. R. Mackenzie, of Chester; A. W. Reen, of Peoria (recently appointed to fill a vacancy), and the Secretary, John H. Rauch, of Chicago.

Dr. A. L. Clark, the Treasurer, presented his annual statement for the year 1883, accounting for the receipts through the Secretary's office of $904.91, and the expenditure of $715.85, leaving a balance in his hands of $189.06, independent of the regular appropriations.

The Secretary, Dr. Rauch, presented his quarterly report, in which is also included an annual summary. The following are the more important points:

THE PUBLIC HEALTH.

Scarlet fever has continued during the quarter in many localities, but without, in any case, assuming a serious epidemic form, while the death-rate from it remained unusually low. The German edition of the Board's circular on scarlet fever, alluded to in the last quarterly report as in preparation has been published and distributed to many points. Diphtheria has been reported from several places.

Small-pox has appeared at Stone Fort, Saline county; Farina, Fayette county; McLeansboro, Hamilton county; and Alton, Madison county. The disease was also reported October 31, from Paris, Edgar county, but the case was subsequently ascertained to have been chicken-pox. At Stone Fort the disease was introduced by a woman who had been attending the St. Louis fair; took sick a few days after her return, and died on the thirteenth day of an attack of unmodified confluent small-pox. Of seven other members of her family four contracted the disease, the remaining three escaping through successful vaccination after exposure. A relative's family, liv-

ing in the adjoining township, in Pope county, also contracted the disease, and in turn infected the attending physician. Except this latter and one woman, none of those attacked had even been successfully vaccinated prior to exposure. The physician and woman above referred to had both been vaccinated in childhood, and escaped with mild attacks of varioloid. Of the remaining cases, seven in number, all died of unmodified confluent or hæmorrhagic small-pox. The situation became so serious, and so much apprehension existed in the community and neighborhood about the middle of November that the Secretary was compelled to visit the locality in person, which he did November 20-24. Reporters, Drs. W. R. Osborne and D. Bozarth, Stone Fort, attending physicians. The case near Farina was also due to contagion, contracted near St. Louis, an unvaccinated young woman, who finally recovered after a severe attack of hæmorrhagic small-pox. Fortunately the other members of the family in which the case occurred were all protected by vaccination, and no other cases resulted. Reporter, A. R. Hancock, M.D., Farina, attending physician. On the first of December an unvaccinated public scholar at McLeansboro was found in the febrile stage of what proved to be an attack of small-pox, from which, however, she ultimately recovered. Source of contagion unknown. A large number of others were exposed, and although vaccination was freely resorted to, six more cases followed, of which number two died. None of the seven had ever been vaccinated prior to exposure. Reporter, C. M. Lyons, M.D., McLeansboro, attending physician. A fatal case of small-pox occurred in Alton during the early part of December, contracted in St. Louis, notwithstanding the case was not discovered until the eleventh day, and a number of persons were exposed in the boarding house where it occurred, only one other case resulted; one of his nurses, vaccinated in childhood, but not successfully re-vaccinated until after nearly two weeks' exposure. This patient died on the fifth day, the disease being the rare form of pupura variolosa. Reporter, W. A. Haskell, M.D., Alton, attending physician.

TRICHINIASIS.

Three outbreaks of trichiniasis—one of them resulting in three deaths—have occurred, the first during the early part of November, in a family near Gardner, Grundy county; the second and third during December, in Woodburn, Macoupin county, and in Bloomington, respectively. The Gardner and Bloomington cases resulted from eating uncooked pork and sausage, and the Woodburn cases from raw smoked sausage. Specimens of the meat from Gardner and Woodburn were sent to the Secretary for examination, the character of the disease being only suspected, until the microscope showed in one case about 2,000, and in the other about 8,000 trichinæ to the cubic inch.

Dr. A. T. Darrah reports the Bloomington outbreak quite fully, and Drs. Taxis and Reid, of Gardner and Woodburn, respectively, have promised detailed reports of their cases. The matter, however, possesses little sanitary importance, except that it is well to put on record every authentic instance of the occurrence of trichiniasis, and to determine its cause. Since 1866 I have noted every such instance in this State, and of the deaths resulting, which now number 16, and, without exception, they have been caused by eating uncooked or imperfectly cooked pork in some form. I see no reason to modify the opinion expressed in 1881 in reference to an inquiry addressed to me by a committee of the Chicago Board of Trade, and by the State Department at Washington, to-wit: That, as a sanitarian, I regard the danger to human life from trichinæ as practically amounting to nothing, it being so easily prevented by thorough cooking.

The investigations which have been made during the past four years, both in this country and abroad, show American pork to be less liable to trichinous infection than that of other countries. The hog in every country is subject to the parasite; even the wild swine in European forests have been found infected, and an outbreak of trichiniasis in 1881 at the village of Khiam, near the source of the Jordan, in Palestine, was caused by the flesh of a wild boar slain in the woods near the village. Prof. Virchow is recently reported to have condemned the outcry against American pork as utterly illogical, unnecessary, and unjustifiable by sanitary reasons, and adds that "no case of trichinæ in American hog meat has been proved to exist in Germany for ten years." Neither in Switzerland nor England has it been found necessary to interfere with the importation of American hog products; and yet in these countries their reputation is higher than ever before. As previously remarked, the question is one of economic and commercial importance, and in only a very limited sense has it any sanitary interest. Proper cooking will render the most badly infected piece of trichinous meat absolutely innocuous. Exposure to a temperature of 150–160 degrees, Fahrenheit, is fatal to the trichinæ.

PRECAUTIONS AGAINST DANGER TO LIFE FROM FIRES.

The recent loss of life by fire at Belleville, suggests the point whether the Board can profitably take any further action looking to securing adequate provision for escape from, and for the extinguishing of, fires in public buildings. On different occasions within the past few years the Board has called attention to this subject—the last time in the fall of 1881, with reference to the danger from fire at seaside resorts, and this was emphasized soon after the Secretary's circular letter was sent out, by the destruction of no less than six of these inflammable structures within a very short time. Fortunately, these fires occurred at a season of the year when there were only a few, in some cases no inmates, and nothing worse than the rapid destruction of the buildings and contents happened. These events, however, served to direct attention to the subject, and there is reason to believe that this class of buildings is much improved in this respect. I think it would be well to prepare a suitable letter with necessary instructions, and address to all those having charge of public buildings in the State, with the view of publishing a report on the

condition of such structures, with reference to the number of stories, sizes and arrangement of rooms, number and dimension of staircases, doorways, windows, and other exits, special provisions for escape, and for extinguishing fires, etc. Such a report would serve a useful purpose in disclosing to what extent municipal, State, or other interference may be necessary to correct such dangers as are found to exist

CHICAGO SEWAGE.

In my last quarterly report, speaking of the solution of the various questions hinging upon the disposal of the sewage from the city of Chicago through the Illinois and Michigan canal, I observed that it was "clearly the duty of the city of Chicago, immediately upon the close of navigation, to have the Bridgeport pumps put into operation, and their capacity and the capacity of the canal determined by actual experiment." I am glad to say that this experiment is now being carried on, and I am in receipt of a telegram from Superintendent Thomas, announcing that the "Bridgeport pumps are working finely, and are holding three feet of water in the canal above the level of the Chicago river."

ELECTION OF OFFICERS.

The following officers have been elected their own successors for the ensuing year: Hon. Newton Bateman, LL.D., President; A. L. Clark, M.D., Treasurer; John H. Rauch, M.D., Secretary.

THE AFTERNOON SESSION

was devoted to executive business. The relations of colleges to the new schedule of requirements in medical education now in force by the Board was the principal subject under consideration. Among other action taken was the adoption of an order refusing to recognize diplomas of the Joplin College of Physicians and Surgeons, and of the Kansas City Hospital Medical College. Adjourned sine die.

NECROLOGY.

STODDARD, SAMSON, M.D., was born Feb. 7, 1806, at Vienna, Oneida Co., N. Y., and died August 24, 1876, at Albion, Calhoun Co., Michigan.

The subject of this sketch, Dr. Stoddard, was of the seventh generation of the Stoddard family in America—Anthony Stoddard, the founder of the same, having emigrated from England and come to Boston in 1639. The published genealogy of this family, now extending over a period of nearly two centuries and a half, shows that the traditions and practice of the ancestry were uniformly in the direction of education and scholastic culture, and that more of them were members of the liberal and learned professions than is often observed even in New England families. Thus if there be such a thing as a legacy of culture or an inherited tendency towards learning, it is quite sure that this belonged by right of birth to Dr. Stoddard.

His father, Rev. Goodwin Stoddard, was a Methodist itinerant, and therefore the doctor's boyhood life was subject to the frequent changes and genteel poverty incident to the career of a Methodist clergyman. This irregular life is not usually well calculated to advance the education or the moral training of children, and yet, despite this drawback, the doctor early manifested an intense love for study and a tireless perseverance in the acquirement of knowledge. When he was sixteen years of age he entered Wyoming Seminary, remaining there three years, excepting three months when he taught a district school. Immediately after leaving the seminary he took up the study of medicine, for the study of which he had a great passion, and a special aptitude for its practice. In October, 1825, he entered Fairfield Medical College, which was a branch of the University of New York, and the only medical school in what was then called the western part of that State. At that period there were only five chairs and five professors, showing what were the meager advantages of the medical student of that time compared with the present. He graduated at the close of the session of 1828-9, but spent only one year in the practice of his profession in his native State, when he determined to try his fortunes in the then "far West," as Michigan was called. He reached Jacksonburg, now the city of Jackson, Mich., in the early part of September, 1830. Only eight or ten families had preceded him, and he was the first physician to locate there. He became a member of the Medical Society of the Territory of Michigan, Feb. 10, 1831. In the practice of his profession his ride had a circuit of thirty miles or more. In those days the practice of medicine was no sinecure. Very many times long journeys on foot had to be taken where no horse could be rode, and over streams spanned only by a single log, and where swollen streams and wide marshes would not permit the crossing by any other means. The people were poor, drugs were dear, so doctors did not rapidly become rich.

In the spring of 1832 the doctor married Miss Sarah M. Blake, of Livonia, N. Y., who died in July, 1851. He remained in Jackson till the spring of 1836, when he moved to a large farm fifteen miles west from Jackson, where he remained till 1873, at which time he moved to Albion, where he died. While clearing up and cultivating his farm, he still carried on a large medical practice. For years it was his custom to labor on the farm all day, and then ride half or two-thirds of the night. For a long time, thanks to a splendid constitution, he bore up under this great sacrifice of needed sleep. But as the cares of a large family came on and the anxieties of a more extended farming interest occupied his attention, his health began to break down, and as early as 1854 he entirely gave up the practice of medicine and bestowed his whole attention to business pursuits. But it was always the regret of his later years that he did not remain in Jackson and devote himself wholly to his profession to the exclusion of every other interest.

Dr. Stoddard was a man of strict probity of character, a hater of shams and subterfuges of all kinds, and whose word was a bond. He never lost his love for the profession of his choice, and to his last days kept himself familiar with its literature. He did a

large pioneer work in a new country for his profession, very much of it poorly paid for, or not at all. But he gloried in his work, and was ever ready to respond to the call of the suffering and the needy, and to this day the memory of his labors and character are kept green in an extended circle of friends and grateful patients. J. P. S.

MUSKEGON, MICH., Dec. 28, 1883.

MISCELLANEOUS.

NEW BOOKS.

Butlin, H. T. On Malignant Disease (Sarcoma and Carcinoma) of the Larynx. 8vo. 64 pp. London: Churchill. 5s.

Clouston, T. S. Clinical Lectures on Mental Diseases. 8vo. 652 pp. London: Churchill. 12s 6d.

Milton, J. S. On the Pathology and Treatment of Gonorrhœa. 5th edit. 8vo. 406 pp. London: Renshaw. 16s.

Robinson, Tom. Baldness and Greyness; their Ætiology, Pathology and Treatment. 2nd edit. 8vo. 136 pp. London: Kimpton. 2s 6d.

Semple, A. The Diseases of Children: a Handbook for Practitioners and Students. 8vo. 354 pp. London: Bailliere. 6s.

Transactions of the Edinburgh Obstetrical Society, Vol 8. 8vo. 168 pp. London: Simpkin. 7s 6d.

Tuke, D. H. Illustrations on the Influence of the Mind upon the Body in Health and Disease. 2d edit. 2 vols. 8vo. London: Churchill. 15s.

Aitken, W. A Complete Handbook of Treatment. New York: Bermingham & Co. 12mo. 414 pp. $2.00.

Bartholow, Roberts. A Practical Treatise on Materia Medica and Therapeutics. 5th edit. New York: Appleton. 8vo. 739 pp. $5.00.

Beard, G. M., and Rockwell, A. D. A. Practical Treatise on the Medical and Surgical Uses of Electricity. 4th edit. New York: W. Wood & Co. 8vo. 758 pp. $5.50.

Bloxam, C. Chemistry, Inorganic and Organic. From the 5th London edit. Phila.: H. C. Lea's Son & Co. 8vo. 700 pp. $3.75.

Bumstead, Freeman J., and Taylor, Rob. W. The Pathology and Treatment of Venereal Diseases. 5th edit. Phila: H. C. Lea's Son & Co. 8vo. 906 pp. $4 75.

Diday, P. Treatise on Syphilis in New-born Children and Infants at the Breast. New York: W. Wood & Co. 12mo. 310 pp. Subs. $1.25.

Ellis, E. A Practical Manual of the Diseases of Children. 4th edit. New York: Bermingham & Co. 8vo. 218 pp. $1.00.

Fothergill, J. Milner. The Physiological Factor in Diagnosis. New York: W. Wood & Co. 8vo. 256 pp. $2 25.

Fox, Tilbury, and Fox, T. Colcott. Epitome of Skin Diseases. 3d American edit. Phila.: H. C. Lea's Son & Co. 8vo. 240 pp. $1.25.

Gray, H. Anatomy: Descriptive and Surgical. From the 10th English edit. Philadelphia: H. C. Lea's Son & Co. 8vo. 1023 pp. $6.00.

Hamilton, Oliver McLane. Types of Insanity. New York: W. Wood & Co. 8vo. $2 50.

Hill, Berkeley. The Essentials of Bandaging, etc. 5th edit. New York: J. H. Vail & Co. 12mo. 13, 341 pp. $1.75.

Holmes, T. A., and Walker, J. W. A System of Surgery, etc. 3d (English) edit. New York: W. Wood & Co. 3 vols. 8vo. $7.00.

Hun, H. A Guide to American Medical Students in Europe. New York: W. Wood & Co. 8vo. 151 pp. $1.25.

Klein, E. Elements of Histology. Phila.: Henry C. Lea's Son & Co. 8vo. $1.50.

Mann, G. C. Manual of Pyschological Medicine and Allied Nervous Disorders. Phila: P. Blakiston, Son & Co. 8vo. 700 pp. $5 00.

Maudsley, H. Body and Will; being an essay concerning will in its metaphysical, physiological and pathological aspects. New York: Appleton. 8vo. 6, 333 pp. $2.50.

Merrell, Albert Digest of Materia Medica and Pharmacy, etc. Phila: P. Blakiston, Son & Co. 8vo. $4 00.

Meyer, G. Herman von The Organs of Speech and their Application in the Formation of Articulate Sounds. New York: Appleton. 12mo. 12, 349 pp., illus $1.75.

Millard, H B. Treatise on Bright's Disease of the Kidneys, etc. New York: W. Wood & Co. 14, 266 pp. $2.50.

Otis, Fessenden N. Practical clinical Lessons on Syphilis and the Genito-Urinary Diseases. New York: Bermingham & Co. 8vo. 584 pp. $4 50.

Parkes, Edmund A. A Manual of Practical Hygiene. 6th edition, with an American appendix by F. N. Owen. New York: W Wood & Co. 12mo. 15, 368 pp. Subs. $1 25.

Pilcher, S S. The Treatment of Wounds, etc. New York: W. Wood & Co. 12mo. 12, 391 pp, Subs $1.25.

Pomeroy, Oren D. The Diagnosis and Treatment of Diseases of the Ear. New York: Bermingham & Co. 8vo. 392 pp. illus. $3 00.

Quain's Anatomy. 9th edit. New York: W. Wood & Co. 2 vols. $12.00

Taylor, Alfred Swain. The Principles and Practice of Medical Jurisprudence. 3d edit. Phila: H. C. Lea's Son & Co. 2 vols 8vo. $10 00.

Ward, G. Mason. A Compend of Inorganic Chemistry, with table of elements. Phila: P. Blakiston, Son & Co. 12mo. (Quiz compends, No. 6) $100—interleaved, $1.25.

Watts, H. Manual of Chemistry, Physical and Inorganic. Phila: P. Blakiston, Son & Co. 12mo. $2 25.

Wells, J. Soelberg. A Treatise on Diseases of the Eye. 4th American, from the 3d English, and with selections from the test types of Profs E Jaeger and H. Snellen. Phila: H. C. Lea's Son & Co. 8vo 19, 33, 846 pp. $5.00

Wickes, Stephen. Sepulture: its history, methods, and sanitary requisites Phila.: P. Blakiston, Son & Co 8vo. $1.50.

Wilson, G. Handbook of Hygiene and Sanitary Science. 5th edit. Phila: P. Blakiston, Son & Co. 12mo. $2.75.

Witthaus, R. A. The Medical Student's Manual of Chemistry. New York: W. Wood & Co. 8vo. 370 pp. $3.50.

Archiv. f. die gesammte Physiologie der Menschen u. der Thiere. Pflüger. 33 bd. Bonn: Straus.

Callmeyer, Diedr. Experimentelle Untersuchungen ueb. die Wirkung der Cotoins Inaugural Dissertation. 8vo. 43 pp. Göttingen: Vanderhoeck & Ruprecht.

Diedrich, Geo. Ueber Oxydimorphin u. seine Wirkung auf den thierischen Organismus. Inaugural Dissertation. 8vo 43 pp. Göttingen: Vanderhoeck & Ruprecht.

Huebner, Wilh Die Diphtheritis heilbar! 8vo x. 28 pp. Leipzig: Hucke

Klöppel, Chrph. Beiträge zur Lehre v. de Poliomyelitis anterior acuta adultorum. Inaugural Dissertation. 8vo. 36 pp. Göttingen: Vandenhoeck & Ruprecht.

Kölliker, A Zur Entwicklung der Anges u. Geruchsorganes menschlicher Embryonen 8vo. 31 pp. Wurzburg: Stabel.

OFFICIAL LIST OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT UNITED STATES ARMY, FROM JANUARY 11, 1884, TO JANUARY 18, 1884.

Brewster, W. B., First Lieutenant and Assistant Surgeon: resignation accepted by the President, to take effect February 7, 1884. (S. O., 10, A. G. O., January 12, 1884.)

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—THE—

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ORIGINAL ARTICLES.

TREATMENT OF STRICTURE OF THE URETHRA.

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In no department of medicine or surgery has scientific progress been more rapid during the last few decades, than in genito-urinary surgery. The unity of hard and soft chancre is a theory no longer entertained. Tapping the bladder through the rectum with an ordinary trocar has been superseded by the superior process of aspiration above the pubes. "Tieing in" of catheters and sounds, in the treatment of various urinary affections, has been mostly abandoned. Locating stricture with a sound of even caliber, and considering every adult urethra where a No. 14 or 15 English sound could be passed, as large enough, aré fallacies no longer accepted.

I will here confine my remarks to the treatment of organic or permanent stricture of the urethra. This of itself is a very wide and comprehensive subject, and an elaborate discussion of which would occupy too much time. I shall, therefore, notice in a general way what I consider the more salient features of the same, with a report of some cases.

Only a few years ago, even among specialists, if a man was examined and found to have a capacity sufficient to admit a No. 14 or 15 English sound, he was informed that no stricture existed. The patient presented himself to the physician with some urinary trouble, which in reality was the direct result, reflex or otherwise, of a stricture of large caliber. He was possibly interrogated as to whether he had ever had a gonorrhœa, and answered in the affirmative. He was then asked if it was followed by a gleet, and answers in the affirmative. He was then possibly asked if the urinary stream had diminished in size since the attack of gonorrhœa, and, as usual in stricture of large caliber, especially when the meatus is naturally small, says it has not. The patient was then considered as entirely free from stricture, or, if any at all existed, nothing capable of producing evil consequences. But to be doubly certain as to his correctness in excluding stricture, the physician then passed a sound, possibly as large as the meatus would admit, which may not be over a No. 12 or 14 English, and found that it could be made to enter the bladder. Stricture was then supposed to be out of the question. The patient was now put under treatment for cystitis, with accompanying backache, pains in the groins or perinæum, or, if he had a gleet, he was treated for that. After six months' or a year's time had elapsed, and the physician had tried nearly all the recommended remedies, without success, he consoled himself and patient by saying that such complaints were very stubborn and unyielding to treatment, and sometimes baffle all medical skill for the time being, and he was then informed that nothing but nature and time would accomplish the desired object, and was recommended to go south. or north, or west, as the case might be. This hypothetical case is a true picture of what we often see. No importance whatever, I think, should be attached to the statement by the patient, that his stream is full size. The size of the stream *may* afford quite conclusive evidence of the *presence* of stricture, but not of its *non-existence.*

All strictures vary in the *size of the circle described by the contracting band*, in the *width* of the same, in their *location*, and in the *number* in each case, so the treatment in each case must necessarily vary to some extent. It may, however, be classed under two principal heads, viz.: that indicated in what is known as stricture of large caliber, and that applicable in those of small caliber: The object of treatment is mainly two-fold, viz.: to restore the urethra to its normal caliber, and to maintain the same after the normal caliber has been secured. The number of devices that are and have been in use to accomplish this object, are numerous. Instruments for drawing the water, making applications to the urethra, etc., have been in use for the last 2,000 years; but not until in the seventeenth century do we find any positive evidence of their having been used for the purpose of dilatation or actual stretching of the stricture, and not until the present century was internal urethrotomy practiced to any extent.

Before any mode of treatment has been adopted, the normal caliber of the urethra should be ascertained, which can be very accurately accomplished by the use of Otis' urethrometer. The size of the urethra being proportionate to that of the entire organ, however, a sufficiently accurate knowledge of its normal character may be ascertained by measuring the circumference of the penis in the flaccid state, between which and the size of the urethra a constant relation exists. For instance, a penis measuring three and one-half inches in circumference,

as a general thing may be said to have a caliber of 35 millimeters, equivalent to about a 21 English or 23 American sound. A circumference of three inches would give a urethral caliber of about 30 millimeters, etc.

After the normal urethral caliber and the size and location of the stricture have been ascertained, the mode of procedure which I adopt, when the caliber of the stricture is large enough to admit, and the patient willing, is internal urethrotomy, and for which purpose I prefer Otis' dilating urethrotome to all other cutting instruments. If the stricture is too small to admit Otis' instrument, and Thompson's divulsor can be got in, I stretch sufficiently with it to admit the Otis instrument, and then treat it the same as if it had been of large caliber, viz.: stretch to full size, and then cut each stricture with the Otis instrument. For reasons too numerous and lengthy to be given in this paper, I think this mode preferable to all others of a dilating or cutting kind. Dilatation with the conical steel sound is very painful and slow, and, I think, more uncertain in both immediate and ultimate results.

The tendencies of all strictures, I think, after being cured by any method, is to gradually decrease some in caliber if an instrument is not occasionally passed; but I very much doubt the possibility of their ever becoming as small, after internal cutting and stretching to full size in this way, with the frequent use of the full-sized sound until entirely healed, as they were previous to the operation. To insure the permanency of the cure, however, I always provide the patient with a full-sized sound, with instructions to pass it at intervals afterwards. One thing certain, in my experience, the cure of the gleet by the above process is attained in a very short time if the *full* and *complete* caliber be restored.

If the stricture be of too small a caliber to admit a Thompson's dilator, or even a filiform bougie, I think it advisable that plenty of time should be taken, and several attempts be made at different sittings, to pass a filiform and a Thompson's divulsor over it, which, if accomplished, renders the operative procedure much more simple and less dangerous to the patient than the operation of external perineal urethrotomy, which is the only resort, should an entrance to the bladder through the urethra be found impossible. If anything larger than a filiform can be passed, the strictures can generally be dilated in time so as to admit a Thompson's instrument over a filiform. A still smaller instrument, known as Maisonneuve's urethrotome, may be used if thought advisable, it being about No. 3 English in size, and Thompson's about No. 5. But it has the disadvantage of being liable to cut the urethra more or less in its entire length. As soon as successful in passing either of these instruments into the bladder, the strictures should be enlarged before they are withdrawn. Then, as in large caliber, they should be again stretched and cut to full size with Otis' instrument at the same sitting. This operation, as most all others of a stretching or cutting kind, I generally make under chloroform. When all strictures are broken up, a full-sized sound, which may be all the way from a No. 18 to a No. 24, English, should be passed in a few times to make sure that the passage is entirely free.

Should all efforts at passing an instrument into the bladder fail, the external perineal operation must be resorted to. A general description of perineal urethrotomy is not necessary. I will here report a case in practice, however, of extreme stricture, in which the operation was involved, together with some cases treated by other methods.

CASE I.—H. E., aged 34, lawyer, with good constitution, presented himself October 20, 1882, with the following history: Contracted gonorrhœa in 1873, which lasted two or three months. The attack being very stubborn and unyielding; very strong injections were occasionally used. Was troubled considerably with chordee, which, during intercourse, broke several times, giving rise to considerable hæmorrhage. Gleet continued until 1875, with frequent urination, at which time he began to have retention. A sound was then passed for the first time, and the caliber of the smallest stricture found to be about No. 8 English. From that time the retentions became more frequent, and were quite often accompanied by violent rigors. The acts of urination also became somewhat more frequent, and there was almost constantly a small amount of dribbling. To relieve the retention, patient got in the habit of going into a Turkish bath, and with a syringe, which he always kept with him for the purpose, would forcibly inject the penis full of hot water, till it would force it away through the strictures, as it were, on into the bladder. The urine would then, he states, almost invariably flow off quite freely at once. He attached much more importance, however, to the use of the syringe and hot water, than he did to the bath; the latter being resorted to more for the relief of the rigors, than for the relief of the retention. From 1878 to 1880, efforts at gradual dilatation with sounds were made by a physician of Milwaukee, where he resided. Was at one time able to get in a No. 6 English. Got married in 1880, since which time the acts of retention have been less frequent, though great difficulty is experienced in urinating, which act is preceded and followed by dribbling, for which he wears a urinal.

Examination: Penis, 3½ inches in circumference. Meatus, 20 French. From meatus to peno-scrotal fold there are three strictures, varying in size from 7 to 9 French, 2 to 4 English. Immediately posterior to this it becomes filiform, and at 6½ inches filiform is grasped and entirely arrested. Advise external perineal urethrotomy.

March 15.—Operation: The bowels having been previously moved by a cathartic, and the urine rendered alkaline by citrate of potash, patient was put under chloroform, and after half an hours' effort, failed to enter the bladder. I then, assisted by my brother, Thomas N. Reynolds, M.D., of Detroit, and my three students, made the external perineal operation without a guide. Found one very fine and long stricture near the scrotum, and another at the membranous portion. Found also a pocket at upper and front side of prostate an inch deep, and large enough

to admit the finger; the septum between which and the anterior ¾ of an inch of the prostatic portion, I was obliged to divide before a full-size sound could be passed. I then passed Thompson's divulsor from the perineal wound forwards and out at the meatus. It, being several sizes larger than the strictures, had to be forced through; which, with the manœuver of passing from behind forwards, may be more easily accomplished. This being done, the instrument was turned up to full size and then withdrawn. The operation was then completed by stretching the strictures up to 38 French, and cutting them, and incising the meatus with Otis' divulsing urethrotome. Might say right here, that by turning the Otis instrument upside-down, so it cuts towards the frænum, there is nothing better for dividing the meatus.

After-treatment: Patient kept under anodynes for a week, and bowels moved by injections every day. Citrate of potash continued till wound healed. No. 36 sound passed every other day and wound thoroughly cleansed every day with warm water and castile soap. Penis also cleansed every day till perineal wound was about to close, by forcibly injecting the same through it. No antiseptics were used.

March 31. Perineal wound closed, the sixteenth day, so that from that time no more urine escaped through.

April 13. Patient sits up and passed the No. 36 sound himself. Was able to retain urine longer immediately after the operation than he had done since first gonorrhœa.

April 26. Perineal wound has cicatrized very kindly, and no bad symptoms of any kind during the entire convalescence. Continues to pass his No. 36 sound every other day, and has completely recovered from all his previous bad symptoms referable to the stricture.

Case II.—E. G., æt. 20, laborer, with good constitution and fair habits, presented himself on March 13, 1882, with the following history: Contracted gonorrhœa seven or eight months previous, which was followed by gleet that lasted ever since. Was told by his physician, after the gleet had continued two or three months, that he had a stricture, who accordingly treated him for the same, and finally informed him that it was cured. The gleet was, however, not arrested.

Examination: Penis 4 inches in circumference, meatus extremely large, being 40 French; strictures at 4½ and 7 inches with calibers of 29 and 22 French respectively, equivalent to 17 and 13 English.

March 14. Operation: The urine having been rendered alkaline with citrate of potash, and the bowels moved by a mild cathartic, patient was put under chloroform and strictures stretched up to 38 and cut with Otis' divulsing urethrotome. Hæmorrhage slight; kept under anodynes in bed for 48 hours and alkali continued until well. No. 37 passed on third day and every other day afterwards.

March 20. Had slight hæmorrage.

March 29. Was taken with another hæmorrhage, for which I was called. Did the penis up in splints, which immediately arrested it, and there has been no more hæmorrhage since.

April 3. Gleet all stopped, and patient dismissed with instruction to pass his No. 36 sound every few days.

Case III.—June 28, 1883, R. S., æt. 33, farmer, with good constitution and good habits, gives the following history: Had gonorrhœa nine years ago, followed by gleet, which lasted several months. Since shortly after that time he has been troubled continuously with frequent micturition, pain in the back, over the pubes and in the perinæum; which condition has grown gradually worse, till at the present time he is obliged to urinate several time during the night, every hour or two during the day, and has now become almost totally unable to perform manual labor. Medicinal remedies fail to have any beneficial effect, and patient decides to have "something done."

Examination: Penis 3¼ inches in circumference; meatus 15 English; strictures at 4½ and 6½ inches with calibers of 10 and 8 English, respectively.

June 27. Operation. The bowels having been moved by cathartic, and urine rendered alkaline, patient was put under chloroform; the meatus cut, and strictures stretched with Thomson's divulsor up to full capacity, which is about 21 English, or 35 French. No. 18 English was the largest sound that could be passed immediately after the operation, but as patient objected to having any cutting done, no further operations were made.

June 29. Patient doing well. No. 16 English, which is the largest size that will *now* pass, is used and repeated every few days for two months. Patient's condition improved rapidly, and in a short time he was only occasionally obliged to pass the water during the night, and much less frequently through the day than before the operation.

April 10, 1883. Examined, and find strictures at 4½ inches, which was no doubt resilient, and should have been cut. Patient's general condition is much better than previous to the operation, however, and he might no doubt be completely restored to his former health by a cutting operation, whereby the normal caliber would be secured and maintained.

Case IV.—R. I., æt. 30, single, with good constitution and regular habits, gives the following history: Had gonorrhœa in 1880, in 1881, and in 1882. The last attack was followed by gleet, which lasted ever since, with more or less cystic irritation, pain in the perinæum, over the pubes, etc.

September 14, 1882. Examination. Penis, 3½ inches; meatus, 28 French; strictures at 2½ and 6½ inches, with calibers of 28 and 18 French respectively.

September 16. Treatment. Commenced treatment by gradual dilatation with conical steel sound, passing as large a size as the strictures would admit twice a week, and a smaller size every day.

January 20, 1883. Have carried dilatation up from No. 18 to No. 27 French. Pain and irritation less, but gleet continues, though not so bad.

February 20. Irritation and soreness in perinæum only comes on occasionally, but the gleet remains the same.

April 1. Incised the meatusup to No. 35, by put-

ting it on the stretch and cutting with Otis's urethrotome.

May 1. No. 30 now passes readily; gleet continues.

June 1. No. 32 passes comfortably, but gleet still continues.

Here is a case where nine months' treatment by gradual dilatation has not secured as good an immediate result as might have been obtained in three weeks by cutting and stretching, with no better prospects of maintaining what has already been secured.

It will be noticed by the results of the above cases, which are intended to represent about the average results from each method, that the surest, quickest, and least painful treatment for stricture of either large or small caliber, seems to be by a method that at once secures the complete normal caliber of the canal, and warrants the permanency of the same, with the continued use of the sound, at least, if not without. I believe it is not the usual custom to cut very deep strictures, but I have never yet seen hæmorrhage, or other unfavorable symptoms, resulting from the operation sufficient to give much trouble, and I now always cut, regardless of location. I will say, in conclusion, however, that I think the success of even the cutting and stretching method depends entirely upon *the completeness of the removal of all obstruction to the canal.* Even the slightest constriction left remaining may be sufficient to keep up irritation, and form a ground-work for future contraction, with perhaps a continuance or renewal of gleet; and I would, therefore, suggest that the stretching be carried even beyond the normal caliber, with the immediate and continued use till healed, at least, of a *full* sized sound. This may necessitate the manufacture of a specially large instrument, but I consider it one of the chief elements in the complete and ultimate success of the operation.

SOME RULES OF THE COMMON LAW RESPECTING THE DISPOSITION OF HUMAN DEAD BODIES.

A SKETCH OF ENGLISH LEGISLATION UPON THE SUBJECT OF ANATOMY, AND A DRAFT OF AN ACT TO PROMOTE THE SCIENCE OF ANATOMY, MEDICINE, AND SURGERY IN THE STATE OF ILLINOIS.

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So far as the writer has been able to discover, there seems in all ages to have been, in the non-professional mind at least, a peculiar aversion and horror of dead bodies of human beings. The laws of Thena, enacted, according to Sir Wm. Jones, from 880 to 1,280 years before Christ (Sir Wm. Jones' Works, pp. 79-80), contain many provisions respecting uncleanness and purification therefrom, by reason of the dead, and it seems everywhere assumed that dead bodies are unclean. Thus, among many other provisions, we find the following: "He who has touched a chandala, a woman in her courses, an outcast for deadly sin, a new-born child, *a corpse*, or one who has touched a corpse, is made pure by bathing." —Laws of Thena, ch. 5, § 85.

"Should a Brahmin touch a human bone moist with oil, he is purified by bathing; if it be not oily, by stroking a cow, or by looking at the sun, having sprinkled his mouth with water."—Ib., § 87.

Likewise, by the laws of the Franks, a person who dug a corpse out of the ground in order to strip it, was banished from society, and no one suffered to relieve his wants till the relations of the deceased consented to his re-admission.—4 Black. Com., 235; Montesq. Spir. Laws, b. xxx, c. 19.

By the common law of England—and I suppose the rule of the American common law is the same—it is an indictable offense to take up a dead body, even for the purpose of dissection, as being "*contra bonos mores*, at the bare idea alone of which," say the court in Rex v. Lynn, 2 Term, R. 733, "nature revolted." See 1 Russ. on Crimes, 629; 2 East's P. C., c. 16, § 89, p. 652; 1 Leach (4th ed.), 497; Commonwealth v. Cooley, 10 Pick. 37; Kanavan's Case, 1 Me., 226.

While it is true that at the common law there can be no property in a corpse (4 Black. Com., 235; 2 East's P. C., c. 16, § 89, p. 652; Williams v. Williams, English High Court of Justice, chancery division, reported in 21 Am. Law Dig. [U. S.], Aug., 1882, p. 508, in the note to which the cases upon the subject are quite fully collected by the writer of this paper), and, therefore, stealing it is no felony; yet it is a very high misdemeanor at the common law (2 East's P. C., 652), and at the present time "body-snatching," so-called, is made a statutory crime in probably every State of this Union.

In the case of Dr. Handyside, where trover was brought against him for two children that grew together, Lord Chief Justice Willes held that the action would not lie, as no person had any property in corpses: 2 East's P. C., 652; Haynes' case, 12 Coke, 113; 4 Black. Com. 235.

The case of Williams v. Williams, above referred to, which referred to the subject of cremation, and in which it was held that a man cannot dispose of his body by will; that it is the executor's duty to bury it, and that meantime he has the right to possession of it, is an interesting case to read in this connection.

If, however, the coffin or any of the grave clothes be stolen with the body, it was a felony at common law: 2 East's P. C., 652; 4 Black. Com. 235; Haynes' Case, 12 Coke, 113; 1 Hale's P. C., 515: 3 Coke Inst. 110.

By the common law, it is an offense against decency to take a person's dead body with intent to sell or dispose of it for gain or profit: 1 Russ. on crimes, 629; Rex v. Gilles, Russ. and Ry. 367, note. Even to sell the dead body of a capital convict for the purposes of dissection where dissection is no part of the sentence, is a misdemeanor and indictable at common law: 1 Russ. on Crimes, 629; Rex v. Cundick, D. and R. N. P. C. 13. See also Commonwealth v. Loring, 8 Pick., 370.

Even the refusal or neglect to bury dead bodies by those whose duty it is to perform the office, appears also to have been considered a misdemeanor: 1 Russ. on Crimes, 631. So, the prevention of the interment of a dead body has been considered indictable: 1 Russ. on Crimes, 637; Rex v. Young, cited in Rex v. Lynn, 1 term R. 734. To cast a dead body into a river has been held indictable at common law as an offense against common decency: Kanavan's case, 1 Me., 226.

A gaoler has no right to detain the body of a person who has died in prison for any debts due to himself, and is indictable for so doing: 1 Russ. on Crimes, 637; Reg. v. Fox, 2 Q. B. 247; Reg. v. Scott, 2 Q. B. 248.

The dissection of human bodies being necessary for the advancement of anatomical and medical science, statutory enactments were made upon the subject in England at an early date, and also exist in many of the States in this country. The statutes of every State and Territory of this country have been examined with reference to this subject, and it was the writer's intention to have incorporated a digest of the same in this paper, but it has been found that such a digest would consume more space than the merits of many of these statutes deserve, and it has been thought better to give the English legislation upon the subject, and at the close to submit a draught of such an act as seems best to fulfil the indications of the case. Access could not be obtained to the continental legislation upon the subject, but accessible legislation in this country and England furnish sufficient material to construct a bill upon the subject.

The first English statute upon the subject of anatomy and dissection that we have been able to find, is section 2 of chapter 42 of 32 Henry VIII., enacted in 1540, and entitled, "For Barbers and Surgeons." The second section of this act is as follows:

"And further be it enacted by the authority aforesaid, that the said masters or governors of the mystery and commonalty of barbers and surgeons of London, and their successors yearly forever, after their said discretions, at their free liberty and pleasure, shall and may have and take without contradiction four persons condemned, adjudged and put to death for felony by the due order of the King's laws of this realm, for anatomies, without further suit or labour to be made to the King's highness, his heirs or successors, (2) and to make incision of the same dead bodies, or otherwise to order the same after their said discretions at their pleasures, for their further and better knowledge, instruction, insight, learning and experience in the said science or faculty of surgery."

By the statute 25 Geo. II., c. 37, 1752, entitled, "An Act for better preventing the horrid crime of murder, (repealed by 9 Geo. IV., c. 31, § 1, 1828, for consolidating and amending the statutes in England relative to offenses against the person; re-enacted in substance in sections 4 and 5 of the same statute, but repealed in 1838 by section 16, of 2 and 3, Wm. IV., ch. 75, which section 16 was itself repealed by 24 and 25, Vict. c. 95, § 1,) it was enacted, after providing (Sec. 1) that murderers should be executed the next day but one after sentence passed; that (Sec. 2) the body of such murderer so convicted shall, if such conviction and execution shall be in the county of Middlesex, or within the city of London or the liberties thereof, be immediately conveyed by the sheriff or sheriffs, his or their deputy or deputies and his or their officers, to the hall of the surgeons' company, or such other place as the said company shall appoint for this purpose, and be delivered to such person as the said company shall appoint for this purpose, and be delivered to such person as the said company shall depute or appoint, who shall give to the sheriff or sheriffs, his or their deputy or deputies, receipt for the same; and the body so delivered to the said company of surgeons shall be dissected and anatomized by the said surgeons or such person as they shall appoint for that purpose, and in case said conviction and execution shall happen to be in any other county or place in Great Britain, then the judge or justice of assize, or other proper judge, shall award the sentence to be put in execution the next day but one after such conviction (except as before excepted) and the body of such murderer shall in like manner be delivered by the sheriff or his deputy, and his officers, to such surgeon as such judge or justice shall direct for the purpose aforesaid."

That the purpose of this act was less to advance the interests of science than to terrify wrongdoers, is evident from section 3, which directs sentence to be pronounced immediately, stating the time of execution and the marks of infamy above specified, "in order to impress a just horror in the mind of the offender, and on the minds of such as shall be present, of the heinous crime of murder."

The statue above quoted has furnished a model, which, with greater or less modifications, has been followed by several of the States of this Union, and among others by the State of Illinois, sec. 443 of whose criminal code provides, that "the court may order, on the application of any respectable surgeon or surgeons, that the body of the convict shall after death be delivered to such surgeon or surgeons for dissection, unless the same be objected to by some relative of the convict."

In 1832 the elaborate act of 2 and 3, Wm. IV, ch. 75, entitled, "An Act for Regulating Schools of Anatomy," was passed, the preamble of which might with profit be read by the present Board of County Commissioners of Cook County; it is as follows:

"Whereas, a knowledge of the causes and nature of sundry diseases, which affect the body, and of the best methods of treating and curing such diseases, and of healing and repairing divers wounds and injuries to which the human frame is liable, cannot be acquired without the aid of anatomical examination; and whereas, the legal supply of human bodies for such anatomical examination is insufficient fully to provide the means of such knowledge; and, whereas, in order further to supply human bodies for such purposes, divers great and grievous crimes have been committed, and lately murder, for the single object of selling for such purposes the bodies of the persons so murdered; and, whereas, therefore it is highly expedi-

ent to give protection, under certain regulations, to the study and practice of anatomy, and to prevent, so far as may be, such great and grievous crimes and murder as aforesaid, be it enacted, etc."

The act then proceeds to provide (sec. 1) for licenses to practice anatomy; (sec. 2) for the appointment of inspectors of schools of anatomy; (sec. 3) the districts they shall superintend; (sec. 4) for returns by the inspectors of subjects removed for anatomical examination; (sec. 5) for the inspection of places where anatomy is practiced; (sec. 6) for salaries of inspectors.

Sec. 7 makes it lawful for any executor or other person having lawful possession of the body of any deceased person, and not being an undertaker or other party entrusted with the body for the sole purpose of interment, to permit such dead body to undergo anatomical examination, unless, to the knowledge of such executor or other person, such person during his life expressed a desire that his body should not undergo such examination, or unless the surviving husband or wife, or any known relative of the deceased, shall require the body to be interred without such examination.

Sec. 8 requires the party having lawful possession of the dead body of any deceased person who has during his life directed the anatomical examination of his body, to direct such examination to be made, unless the deceased person's surviving husband or wife or nearest known relative shall require the body to be interred without such examination.

Sec. 9 prohibits the removal for anatomical examination of the body of any person from the place where such person died within a certain time and without a certificate of the manner of death.

Sec. 10 makes it lawful for professors, surgeons, etc., being licensed as aforesaid, to receive bodies for anatomical examination under the provisions of the act.

Sec. 11 provides that the persons mentioned in the last section shall receive with the body a certificate as aforesaid, which shall be transmitted to the inspector of the district with a return stating from whom received, date and place of death, sex, name, etc., and that the said certificate and particulars shall be by such license recorded in a book kept by him for that purpose, etc.

Sec. 12 requires notice to be given to the Secretary of State of places where anatomy is about to be practiced.

Sec. 13 regulates the manner of removing bodies for examination, provides for their interment after examination, and for the transmission of a certificate of interment to the inspector of the district.

Sec. 14 provides that the persons licensed under the act shall not be liable to punishment for having in their possession or examining dead bodies according to the provisions of the act.

Sec. 15 provides that nothing in the act contained shall be construed to extend to or prohibit any post-mortem examination of any human dead body required or directed to be made by any competent legal authority.

Sec. 16 repeals so much of 9 Geo. IV, ch. 31, as directs that the bodies of murderers may be dissected or hung in chains as ordered by the court; and enacts that such bodies shall be hung in chains or buried, as the court shall direct. (This sec. 16 was repealed by 24 and 25 Vict., c 95, § 1).

Sec. 17 limits the time within which actions for anything done under the act shall be brought, and regulates the pleading therein.

Sec. 18 prescribes the punishment for offenses against the act.

Sec. 19 defines the interpretation of certain words in the act.

Sec. 20 provided that the act should go into effect August 1, 1832.

Sec. 21 provided that the act might be altered or amended during the then present session of Parliament.

In 1871 (34 Vict., ch. 16, § 2), the Secretary of State and the chief Secretary of Ireland were empowered from time to time to vary the period limited by § 13 of 2 and 3 Wm. IV, ch. 75, for transmission of certificates of interment to district inspectors.

This appears to be the latest legislation upon the subject in England.

In this country, there is quite a diversity among the statutes upon this subject, and in many of the States, especially the Southern States, there is no legislation whatever upon the subject, other than statutes prohibiting the robbing of graves, etc. Many statutes, and among them the statute of this State (Rev. Stat. Ill., ch. 91), provide that "it shall be lawful" for the designated officers to deliver up the dead bodies, etc., or that they "may" deliver, etc., without containing words making it the imperative duty of such officers to deliver, etc. It is very possible, and in some cases probable, that the word "may" in such statutes, should be construed to mean "shall" or "must." "The words 'may' or 'shall,' when used in a statute, may be read interchangeably, as will best express the legislative intention. The rule adopted by this court [Supreme Court of Illinois] is 'the word may means *must* or shall only in cases where public interests and rights are concerned, and the public or third persons have a claim *de jure* that the power shall be exercised.'" Schuyler County v. Mercer County, 4 Gilm. 20; Wheeler v. City of Chicago, 24 Ill. 107; Fowler v. Perkins, 77 Ill. 273; Rex v. Barlow, 2 Salk. 609. S. C. Carth, 293; Newburgh Turnpike Co. v. Miller, 5 John. Ch. 112; Malcom v. Rogers, 5 Cow. 188; Hill v. Barge, 12 Ala. 693; Lovell v. Wheaton, 11 Minn. 101; Phelps v. Hawley, 52 N. Y. 27; Rex v. Inhabitants of Derby, Skinner, 370.

Where a statute directs the doing of a thing for the sake of justice or the public good, the word "may" is the same as the word "shall." Rex v. Barlow, 2 Salk. 609; S. C. Carth. 293; People v. Otsego Co., 51 N. Y. 401; People v. Livingston Co, 51 N. Y. 119; Rex v. Inhabitants of Derby, Skin. 370. See also the cases next above cited. Thus, where a statute says that a sheriff *may* take bail, it has been construed to mean that he shall do so. Rex v. Barber, *sup.*

On the other hand, if any right to any one depends

upon giving to the word "shall" an imperative construction, the presumption is that the word was used in reference to such right or benefit; but where no right or benefit to any one depends upon the imperative use of the word, it may be held to be directory merely. Wheeler v. City of Chicago, 24 Ill. 105; Fowler v. Perkins, 77 Ill. 273.

In the draft of a statute upon this subject, therefore, it is better, in order to avoid doubt, to use such words as express unequivocally the intention of the legislature to impose a duty upon the officials mentioned in the act to deliver, etc.

Many statutes contain a provision authorizing the delivery of dead bodies to county medical associations, or to some reputable physician, in cases where there is no medical school in the county. Such a provision, as well as others that might be mentioned, are doubtless very desirable in some cases, but they have not been included in this draft, for the reason that, should this draft be used as a model upon which to frame a bill for introduction into the Legislature, they might antagonize some members, and endanger the passage of the bill. If thought desirable, it will be easy to incorporate such provisions. It has not been attempted to make this bill *perfect*, but only *practicable*. It is believed, however, that all the really good features of the various acts upon this subject, which are to be found upon the statute-books of the various States of this Union, will be found in this bill, and a number of other provisions which seemed necessary have also been incorporated in it.

An Act to promote the science ot anatomy, medicine, and surgery in the State of Illinois.

Be it enacted by the People of the State of Illinois, represented in the General Assembly:

Section 1. The right to dissect the dead body of a human being, or any part thereof, shall exist in the following cases:

(1) In cases authorized by positive enactment of the General Assembly of this State, in this and other statutes.

(2) Whenever a coroner is authorized by law to hold an inquest upon the body, so far as such coroner authorizes dissection for the purposes of the inquest, and no farther.

(3) Whenever and so far as the husband, wife, or next of kin of the deceased, in case the deceased leaves no surviving husband or wife, may authorize dissection for the purpose of ascertaining the cause of death, and no farther.

(4) Whenever a person has, during his lifetime, directed that his dead body, or any part thereof, may or shall be dissected, or where any person has directed or given permission that any part of his body which has become separated therefrom during his lifetime, be dissected, such dissection shall be lawful to the extent authorized by such person, and no farther.

Sec. 2. Every person who makes, or procures to be made, any dissection of the dead body of a human being, or of any part thereof, contrary to the provisions of this act, shall be deemed guilty of a misdemeanor, and upon conviction thereof shall be fined not less than $25 nor more than $100, or be imprisoned in the county jail not less than one month nor more than three months, or shall be punished by both said fine and imprisonment, at the discretion of the court.

Sec. 3. Every superintendent of a penitentiary, State, city, or county hospital for the insane, warden of poor-house, coroner, sheriff, city undertaker, and every other public officer by whatsoever name designated, lawfully having charge of the body of any deceased person required to be buried at the public expense, shall immediately, by telegraph when practicable, otherwise by letter, notify the nearest known relative of such deceased person, if he knows or can with reasonable diligence ascertain the same, or, if no relative can be found, then some personal friend of such deceased person, if any such is known to exist, of the death of such person, and shall deliver the body of such deceased person to any such relative or personal friend, who is known to or shall prove himself to be such, and the officer or authorities having charge of the body, and who shall claim the same for interment within a reasonable time after such notice, not exceeding forty-eight hours after the death of such person; but if no such relative or friend sh all claim the body within forty-eight hours after death, it shall be the duty of such officer or authorities having charge of such body forthwith to deliver the same to the officer or duly authorized agent of any respectable medical college, of whatever school, regularly chartered by this State, making application therefor, and which has given the bond hereinafter referred to, and otherwise complied with the requirements of this act necessary to obtain its benefits; and it shall be lawful for such officer or agent to receive the said dead body, and for the said medical college, through its professors, officers, and students, to use the same as they may deem most for the advancement of anatomical, medical, and surgical science, but for such purposes only, and in this State only.

Provided, That if any body so delivered shall be subsequently claimed for interment by any such relative or friend of the deceased, it or the remains thereof shall be forthwith surrendered up for that purpose.

Provided, also, that the remains of no deceased person who is known during his last sickness to have expressed a desire to be buried; the remains of no traveler dying suddenly, the remains of no person detained on any civil process, or as a witness, shall be so delivered, but shall be decently buried in the usual manner.

Provided, also, that the bodies so delivered shall be distributed among the several respectable, regularly chartered medical colleges of this State, of whatsoever shool of medicine, according to the number of students regularly matriculated during the winter session of the college year next preceding the time of application and distribution; provided, however, that no medical college shall receive more than three (3) bodies, till every other medical college which has filed the bond hereinafter required, otherwise complied with the requirements of this act, and made application therefor, shall have received at least one (1), and no application shall be made, or if made, shall be al-

lowed, till the college so applying is ready to receive and remove the body or bodies applied for, and has given bond hereinafter required and otherwise complied with the requirements of this act. Any violation of any provision of this section shall be deemed a misdemeanor and shall be punished by a fine of not less than $50 nor more than $200, or by imprisonment in the county jail not less than three nor more than six months, or by both said fine and imprisonment at the discretion of the court.

Sec. 4. In order to facilitate the equitable distribution of said bodies, it shall be the duty of every medical college so applying to file with each and every application for a body or bodies a statement of the number of students matriculated as aforesaid, and the number of bodies received by it from all sources up to the date of such applicaiion under the provisions of this act during the current college year, which for the purposes of this act shall be deemed to commence upon the day when this act goes into effect and end on the 31st day of August next ensuing, and every year thereafter shall commence with the 1st day of September and end on the 31st day of August of each and every year, and no application shall be allowed which is not accompanied by such statements. In making the distribution and delivery of dead bodies above provided for, each and any officer or person concerned in the same shall be governed by the statements thus filed and by the principles stated in this and the preceding sections. In order to equalize any irregularity of distribution resulting therefrom, it shall be the duty of each and every medical college claiming the benefit of this act, through its clerk or other recording officer, on or before the 5th day of September, each and every year, to file with the Secretary of the State Board of Health a statement in writing and under oath, of the number of students regularly matriculated during the winter session of the college year ending on the 31st day of August next preceding, and the entire number of bodies received from all sources under this act during the same period; and it shall be the duty of the said Secretary of the State Board of Health forthwith to equalize the distribution of bodies appearing from such statements, according to the principles of this act, and to certify the results of such equalization and transmit a copy thereof under his hand and seal as soon as may be to each college which has filed the statements above required, showing (1) the entire number of bodies each college was entitled to receive under this act during the year next preceding; (2) the number of bodies each college has in fact received; and (3) the number of bodies to be delivered by each college respectively which has received an excess over the number it was entitled to receive, to each college respectively which has received a less number than it was entitled to receive; and therefore it shall be the duty of each college respectively thus appearing to be in excess, to deliver within a reasonable time after the reception of such copy of said certificate, to each college respectively which has received less than the number it was entitled to receive, so many bodies as said certificate shall specify as being necessary to equalize the distribution according to the principles hereinbefore laid down. Every medical college neglecting or refusing to file with the Secretary of the State Board of Health the statement above required, or neglecting or refusing to comply with the terms of equalization above provided for as shown by the said certificate of the Secretary of the State Board of Health, shall thereby forfeit during the the time it shall so neglect or refuse such compliance, all rights and benefits otherwise accruing to it under this act; and a subsequent compliance with such requirements shall not entitle it to the benefits which might have otherwise accrued to it during the period it was so in default.

Sec. 5. Every medical college claiming the benefit of t his act shall, before it shall be entitled to receive any dead body as aforesaid, execute and file with the clerk of the county in which such college is situated, who shall give a receipt therefor, a bond to the People of the State of Illinois in the penal sum of $1,000, with a surety or sureties to be approved by said county clerk, conditioned that each and every body received under the provisions of this act shall be used only for the advancement of anatomical, medical and surgical science, in this State only, and in such a manner as not to shock the public sensibilities, that said college will cause to be kept the record required by this act, and that the remains of every such body after use as aforesaid, shall be decently buried in some public burial ground in this State; which bond shall be renewed on the first day of September of each and every ensuing year.

Sec. 6. The person receiving any dead body under this act shall, in the name and in behalf of the medical college for which he receives it, sign and deliver to the officer or person from whom the same is received, and whose duty it shall be to demand and obtain such receipt, a receipt therefor, stating, if known, the name, age and sex of every such person, and the place, date, and cause of death, if known, which receipt shall be preserved and recorded in a book to be kept for that purpose in the institution, association, or office from which such body shall be delivered, and a copy thereof immediately transmitted to the Secretary of the State Board of Health, whose duty it shall be to file the same in his office. And every medical college receiving any dead body under this act, shall by its demonstrator of anatomy or other analogous officer, in a suitable book to be kept for that purpose, make a legible record of the time when, the name and official station of the person from whom, and the place where such body was received, and whether or not such body when so received was inclosed in any box, cask, or other receptacle, and, if so inclosed, such record shall contain a description of such box, cask, or receptacle sufficient to identify the same, together with the shipping mark, or directions, if any, on the same. Such record shall also contain a description of such body or remains, including the name, if known, sex, length and weight of the body, and the probable age of the deceased at the time of death, color of hair and beard, if any, condition of teeth, and any and all wounds, marks or scars, if any, on such body by which the same might be

identified; and whether or no such body when so received was mutilated so as to prevent identification of the same. And such record shall be preserved by such medical college through its demonstrator of anatomy or other analogous officer, whose duty it shall be to exhibit the same on demand, as also any and all such dead bodies then in his charge, for the inspection of any sheriff or deputy sheriff of this State. Any violation of any provision of this section shall be deemed a misdemeanor, and shall be punished by a fine of not less than $50 nor more than $200, or by imprisonment in the county jail not less than three months nor more than six months, or by both said fine and imprisonment at the discretion of the court.

Sec. 7. Any person who shall buy or offer to buy, sell or offer to sell, the dead body of any human being, or procure the same to be done by another; or any person who shall offer, pay, demand or receive any money or any valuable consideration whatever, or procure the same to be done by another, in consideration of the delivery for anatomical, medical or surgical purposes, of the dead body of any human being, or who shall transport the dead body of any human being beyond the limits of the State for anatomical, medical or surgical purposes, or who shall procure the same to be done by another, shall be deemed guilty of a felony, and upon conviction thereof shall be punished by imprisonment in the State's Prison not less than one year nor more than five years.

Sec. 8. Inasmuch as the law now in force upon the subject of this act is defective, an emergency exists requiring this act to take effect immediately; therefore this act shall take effect and be in force from and after its passage.

PSILOSIS (?) MUCOSÆ INTESTINI.

BY C. M. FENN, M.D., SAN DIEGO, CAL.

In a brief article which you copy from the *Practitioner*, Sept., 1883, I discover that Dr. Thin has anticipated me somewhat in the description of a lesion of the mucous membranes, which I have been studying with much interest, as often as such cases came under my observation. Having met with but few instances of it, and most of these *in transitu* (non-resident), I hesitated to announce my impressions until after further investigation. However, by contributing a few paragraphs now, I may at least assist in calling the attention of others to this peculiar disease.

The name "psilosis (loss of hair by depilation) mucosæ intestini," with which the new malady has been christened, would seem to be somewhat forced in its application to epithelial (intestinal) desquamation, but, perhaps, does not do great violence to our usual nomenclature of diseases.

Though I have not yet been able to recognize the three stages noted by the doctor, and have seen no fatal results, I have every reason to believe, from the similarity of symptoms and the indications of treatment, that the diseases are identical. Having but little to add to his graphic summary of symptoms, I shall confine my remarks chiefly to its pathology, "about which," Dr. Thin says, "little is known."

The histories thus far obtained by me have been of miners, ranchers and Chinese, all single men, who have "roughed it." They had used stimulants to some extent; and at periods more or less remote had suffered from supposed bilious troubles. Some of them had been addicted to patent pills and potions, or had consulted physicians for the relief of some prominent symptom, or general malaise. In some instances, the condition of the posterior nares and pharynx had suggested catarrhal (ozœna) trouble; or a chronically irritable throat had given rise to a suspicion of venereal excesses, syphilis, etc. In others, itching and soreness of the rectum, with or without discharge, had indicated vermifuges and pile remedies, which had been used in vain. Flatulence, diarrhœa, constipation, and other gastric and intestinal disturbances had often been overlooked in the presence of more tangible symptoms. A peculiar odor, simulating that from chronic diarrhœa or dysentery, not infrequently emanated from breath and body. If the disease had been protracted, there was a notable deficiency of adipose tissue, the dry and flabby skin covering the body like an ill-fitting mantle; the hair had become thin; the nails ribbed and horny; and the conjunctiva, especially of the lids, was irritable, if not inflamed. The appetite was always good, sometimes morbid, but food was not properly assimilated. In brief, there was an aged appearance, an obvious impairment of the general physique and system, which, in the absence of advanced age and of the usual exhausting diseases, was remarkable.

The pathology of psilosis, in my opinion, points to a defect in the formative power of the epithelium of the mucous membrane, or to some derangement of the desquamative process. To substantiate this view it will be necessary to consider briefly the function of the bile as taught by later physiologists. In the opinion of Küss, for example, the bile is especially concerned in this desquamation of the intestinal epithelium. After showing that the biliary secretion is not poured into the duodenum until several hours after the ingestion of food, in fact, not until most of the alimentary substances have already been converted into chyle; and that the desquamative process is most active when the bile comes into contact with the epithelial cells, he adds, "the chief purpose served by the bile is thus the renewal of the cellular coats, promoting the decay of the old elements and the restoration of the new." Accepting this theory, and in connection therewith recalling the symptoms of psilosis and allied diseases, as well as the physiological experiments bearing upon this secretion, I think we shall have no difficulty in discovering the *fons et origo mali*.

Bidder and Schmidt's experiments upon animals demonstrated that when the bile is carried off through a fistulous opening in the gall-bladder, the fatty elements of the food are no longer absorbed; the skin becomes dry; the hair falls off; the breath and body exhale foul odors; and the animal, with even a vora-

cious appetite, perishes with symptoms of inanition. Reverting again to the human system, the effect of opium upon all of the secretions is well known. Opium smoking especially interferes with the functions of the liver, mucous membranes and skin. (May not this national habit in part account for the large number of cases of psilosis, which, the writer says, came from China?) So, too, fatty degeneration, atrophy and cirrhosis of the liver, in which there is more or less mechanical interference with the secretion of bile, give rise to indigestion, flatulence, constipation, dry and rough skin, exhaustion and death.

In the absence of a quantitative and qualitative analysis of the bile, it is impossible to determine in what manner it affects the absorptive and other functions of the intestinal epithelium; whether there is not enough of it, as Küss suggests, "to sweep the workshop clean" of the old cells, or whether its vitiated character impairs the function of the new epithelium. But from the fact that symptoms, known to attend suppression and retention of the biliary secretion, are seldom absent at some period of the malady, and that cholagogues are often indicated in the treatment, we may rationally infer that a deficiency of bile is one of the chief factors in the ætiology of psilosis.

A CASE OF POISONING FROM A BELLADONNA PLASTER.

BY HERBERT JUDD, M.D., GALESBURG, ILL.

EDITOR OF THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION:

The case of belladonna poisoning resulting from the application of a belladonna plaster, reported in the *Medical Record* of January 19, 1884, by Martin J. Fleming, M.D., of New York, leads me to report the following case:

February 5, 1883, at 8 P. M., I was called to see C. H., at the Union Hotel, who, while descending the stairs of the hotel one hour before, had slipped and fallen upon his left side and back. His general condition was good, his habits temperate. The only treatment I advised was to apply over the seat of pain a belladonna plaster. The plaster was to be cut from a pattern I made of paper, triangular in shape, and has since been found to aggregate about twenty-six square inches in surface; the plaster was of the ordinary roll plaster, prepared by Seabury & Johnson, not porous. There had been no liniment nor any irritating or soothing lotion of any kind used. There was no abrasion of the skin. At 11 o'clock, three hours later, I was telephoned in great alarm and distress by the hotel people to hurry to my patient. Their replies to my questions concerning his condition were such that I queried with Dr. Ira Wilcox, of New York city (then a guest at my house), and Dr. Hopper and Edgerton, who were also present, if it were possible the patient was affected by the plaster; the plaster had been cut and brought to me for inspection before it was applied, as it had at first been cut wrong and would not fit the body as I had directed; in this manner the size of the plaster and the case had been brought to the notice of the above named physicians. We all thought it could not be the plaster.

I found the patient suffering in an extreme degree from the poisonous effect of belladonna; at least, such was my opinion, and explanation to the terrified attendants. The patient could not see distinctly; the face and neck were flushed to a deep scarlet; he could not swallow and was in spasm. I removed the plaster and gave a hypodermic of morphine; he immediately became quiet, and at the end of one hour was in a nearly natural sleep. The disturbance of vision lasted three days. My patient was a member of the traveling public and a favorite among them, also an old resident of this city, so that I became *famous* for not only giving *strong medicine*, but for using *strong* belladonna plaster

MEDICAL PROGRESS.

MATERIA MEDICA AND THERAPEUTICS.

HYDRIODATE OF HYOSCIN IN PHTHISIS.—Dr. Fräntzel recommends hydriodate of hyoscin in the treatment of night-sweating of phthisis, in subcutaneous doses of half a milligramme ($^1/_{140}$ gr.), or in pill, beginning with the same dose. He does not find it so universally beneficial as atropia, and it sooner exhibits a narcotic action; but he has seen good results from it in cases where atropia has proved useless, or has failed to act after being in use for some time.—(*Wiener Med. Blätter.*) *Practitioner.*

KRANKENHEIL.—Of late years a new spa in Bavaria, to which the suggestive name of Krankenheil has been given, has attained much popularity, especially in the treatment of strumous diseases, skin affections, etc. The water contains principally carbonate of soda, with a little iodine and a small amount of sulphur. Various preparations are made from it; soaps, for toilet and medicinal purposes; soap liquors also; the mother liquor of the spring; the salts in powder and made into lozenges.—*Birmingham Medical Review.*

TREATMENT OF HOARSENESS IN SPEAKERS AND SINGERS.—M. Corson advises the placing in the mouth of a small piece of borax, about two or three grains; it produces an abundant salivation, and the voice becomes clear. He also recommends the use of a couple of grains of potassium nitrate in a glass of sugar and water, or an infusion of 46 grains of jaborandi, and—shortly before using the voice—of a gargle with 6 or 7 ounces of a decoction of barley, 1 to 2 drachms of alum, and 2 drachms of honey of roses.—(Rep. de Pharmacie). *Jour. de la Soc. de Med. de la Haute-Vienne.*

EUCALYPTUS IN GANGRENE OF THE LUNGS.—Dr. Bonamy relates the case of a man, about fifty years of age, who was admitted to hospital suffering from cough, dyspnœa and fever. A few days after admis-

sion, the fœtid odour of his breath became so extreme that it was necessary to separate him from the other patients. There was dullness in the axillary line on the left side over the middle portion of the lung. At this point there was tubular respiration, and crepitant râles were audible at the end of inspiration. The sputa consisted of a black matter, detached portions of which were swimming in an abundant serous fluid. The cough was incessant, and the odor intolerable. A diagnosis was made of gangrene of the lung of superficial extent. The patient was first put upon a mixture containing carbolic acid, but no improvement following, this was replaced by tincture of eucalyptus. In two days after the last prescription the odor of the breath was much less offensive, and in less than two weeks the patient was cured.—(*Le Courrier Medical.*) *Practitioner.*

Bromide of Ethyl.—Prof. O. Berger has found bromide of ethyl useful, (1.) In neuralgic conditions of the nerves of the face and head, in megrim, and in nervous headache and heaviness. The inhalation of twenty to forty drops of the remedy several times a day has lessened headache in cases where quinine, salicylic acid, caffein and guarana had all proved useless; and in three cases of headache connected with cirrhosis of the kidney it was better than any other remedy. (2.) In neurasthenia: it is here given in doses of from one to three grammes twice or thrice a day if necessary. (3.) In epilepsy: here it is of very little use, although Brumeville and D'Ollier considered it useful. They narcotized their patients daily for ten to twenty minutes with it, but when given in doses of one gramme daily by inhalation it is useless. It is besides expensive, and causes much depression. When inhaled before or during the epileptic attack it only prevents or cuts it short in exceptional cases. (4.) In hysteria it is of more use. The attack of hystero-epilepsy may sometimes be cut short by narcotizing with it for ten or fifteen minutes, eight to twelve grammes of the drug being required. When given in doses of a half gramme to two grammes by inhalation, once or twice a day, it may avert a threatened attack of hystero-epilepsy. (5.) In several cases of psychical excitation the bromide of ethyl has proved serviceable.—(*Breslauer ärzt,. Zeitschrift.*) *Practitioner.*

Trichlorphenol, the Best Disinfectant for Gangrenous and Foul Wounds and Ulcers.—In 1879 Dianin noticed that a solution of carbolic acid, to which chloride of calcium had been added, was of great use in foul ulcers, and later he satisfied himself that this was due to the trichlorphenol thus formed. This combination was discovered in 1836 by Loran, and has the formula $C_6 H_2 C L_3 O H$; it is a phenol, wherein three atoms of hydrogen are replaced by three atoms of chlorine. It possesses the characteristics of an acid, forming well-defined salts with potash, magnesia, ammonia, baryta, lead, and calcium. The calcium salt is that which is formed by adding the chloride of lime to the solution of carbolic acid. This combination is an excellent disinfectant, being twenty-five times more powerful than ordinary phenol as an antiseptic. Experiment shows that the power of arresting fermentation, which is possessed by trichlorphenol and its potash and calcium salts, is marked alike whether in arresting the fermentation in wine, putridity in the blood, or the ammoniacal decomposition in the bladder. Clinical observations were made as to its effect on gangrenous ulcers of the limbs, gangrenous phlegmon, wounds from machinery, complicated fractures and dislocations, carbuncles, cancerous ulcers, caries, etc., all more or less gangrenous, and throwing out foul-smelling secretions. For complete purifying of the sloughing surfaces and the production of healthy granulations, usually four to six days were enough, and rarely ten to thirteen days were required. The method of application was generally to apply to the sloughing parts a 5 per cent. solution of the trichlorphenol, and thereafter to cover the parts with a bandage soaked in a 1 per cent. solution. Sometimes the dried trichlorphenol was powdered on, and the bandage allowed to remain from five to eight days. The drug was also used for soft sores, diphtheria, etc. In all cases the disinfectant and deodorizing powers were very strong. The smell of the drug may be hid by the use of oil of lavender. The soda salt has no smell. All the preparations are cheap.—(*Petersb. Med. Wochenschrift*). *Edin. Med. Jour.*

Cider and Its Anti-Calculous Properties.—A writer in the *Gaz. Med. de l'Algerie* calls attention to a recent publication by a pupil of Dr. Denis-Dumont, surgeon-in-chief of the Hotel-Dieu, of Caen, which professes to demonstrate that cider is the enemy of stone in all the varieties of calculi which, from one cause or another, affect the bladder. During a long experience in the hospitals of Caen, Dr. Denis-Dumont was struck with the almost complete absence of patients affected with stone—almost complete, because there were a few cases whose habitual beverage was wine. On treating these cases with cider, they were either considerably benefited, or entirely relieved of their malady. Struck with these facts, Dr. Denis-Dumont entered into correspondence with a large number of the medical practitioners of Normandy, principally those who practiced in localities where cider was the common and almost sole beverage. Of these practitioners, some of whom were of forty years' experience and longer, none had treated a case of stone. If they had treated any affection allied to stone, it was in cases where cider was not the ordinary drink, or it was due to some foreign cause. As a consequence, he has collected a mass of valuable observations which confirm his conjectures, and support him in formulating the proposition that cider is not only a prophylactic against the formation of stone and other affections of the bladder, but also that it is an energetic curative agent, when in the condition to be absorbed, like any ordinary drink, and brewed in the best manner. Cider, even in Normandy, is frequently improperly made—but it would seem that bad cider is not worse than bad wine. The writer, using the precaution to declare that he is not of Normandy, goes on to say, with the effusion of a Frenchman, that, if the results of Dr. Denis-Dumont are

admitted, they will furnish cause enough for the encouragement of plantations of apple-trees, and for the fabrication af a beverage which laughs at the phylloxera, which has been served on the table of a Queen of France, to Saint Radegonde; which Charlemagne did not despise; which was celebrated after the epic mode in a Latin poem dedicated to the glory of Phillippe-Augustus by Guillaume le Breton, and which Francois the First appreciated on his visit to Normandy.

MEDICINE.

LYMPHORRHŒA FROM THE NOSE IN LEUCOCYTHÆMIA.—Dr. Coniel relates the case of a patient suffering from leucocythæmia who had a discharge from the nose of a thick, transparent, glairy fluid. It flowed slowly but constantly, and was neither thin like the discharge of a commencing coryza, nor opaque like that of a more advanced nasal catarrh, but contained a large quantity of white corpuscles. The patient did not sneeze, nor were there any tickling sensations in the nose. At the autopsy the mucous membrane of the nasal fossæ was seen to be smooth, without ulceration, but thickened in places. The thickened parts presented a gray color on section. They were formed by an infiltration of the connective tissue with a mucous transparent fluid, like lymph. It was this leukæmic infiltration of the Schneiderian mucous membrane which was the cause of the nasal lymphorrhœa.—(*Revue Medicale Practitioner.*

THE HOT WATER "CURE."—The *Lancet* has some very timely remarks under this heading. It is probable that we have not yet begun to appreciate how wide-spread is the application of this so-called cure, nor how much mischief it is gradually producing. The article in question says very forcibly: There is no lack of evidence that crude or decomposing contents of the alimentary canal may be washed away by copious draughts of hot water, and that the apparatus of digestion thus cleansed at short intervals will work better than when it is coated with débris and excreta. On the other hand, it is not less well known that the mucous membrane of the stomach and intestines may become permanently congested, and the essential parts of its structure—the organs of secretion and absorption—rendered habitually swollen and turgid, with the result of impairing their functions, by too frequent "fomentation." Like everything else, the use of hot water as a "cure" needs to be determined by considerations of expediency, based on a precise judgment of the state and conditions in each individual case. If it should become popular to drink hot water largely, we shall soon be called upon to treat patients who have done themselves a lasting, and, it may be, a serious injury by this practice. If it should happen that where there already exists a tendency to congestion, the blood-vessels are denied the opportunity of contracting and relieving themselves in the intervals of digestion, or if "gastric juice"—to use a popular term—slowly and laboriously secreted in cases with impaired or debilitated glands, be ruthlessly washed away by too frequent drinking, the "advantages" of the hot water cure are not likely to prove welcome results of a "plan of treatment" which has been misapplied.

We heartily endorse these views as expressed in the *Lancet*, although we do not see how the gastric juice is to be ruthlessly washed away. As we understand it, the hot water is used only in the intervals of digestion, and as the gastric juice is secreted by the stimulus of food to be re-absorbed when it has performed its work of digestion, it could not directly be very much influenced.

OPHTHALMOLOGY.

EPITHELIAL GROWTH FROM AN EYELASH IN THE ANTERIOR CHAMBER.—This case occurred in the practice of Mr. Rockcliffe, of Hull, and is reported in the last number of the *Transactions of the Ophth. Society*. A man received a blow which lacerated the cornea and caused prolapse of the iris, and, at the same time, some slight injury to the lid. The iris receded under atropine, and the injury was not followed by much inflammation. He was first seen six weeks after the accident. At that time, what was supposed to be an eyelash was seen lying in the anterior chamber, and an attempt was made to remove it, but without success. A little more than a year later a tumor 6x2x2 mm. was removed, along with a portion of iris. The growth was examined by Dr. Brailey, who reported: "The mass consists of flattened epithelium cells, exactly like the superficial cells of the conjunctiva, and their nuclei stain very distinctly. It looks as if the cells of the root-sheath of the eyelash had proliferated in the anterior chamber."—*Edin. Med. Jour.*

PHYSIOLOGY.

ON THE ACTION OF INFUSED BEVERAGES ON PEPTIC DIGESTION.—Dr. James W. Fraser (*Edinburgh Clinical and Pathological Journal*) under this heading gives an abstract of the results of a series of experiments performed with the view of elucidating the action of infused beverages in producing the dyspeptic symptoms which so frequently follow their use, and, if possible, to find some means of reducing these undesirable actions. The beverages subjected to experiment were: As examples of the teas—mixed tea, Chinese tea, Indian tea, green tea; of the coffees—ordinary coffee, coffee with chicory, and the coffee berry very slightly roasted, broken into fragments, and the infusion prepared by very brief boiling with water; of the cocoas—Schweitzer's cocoatina, from which part of the fat has been extracted, and Epp's cocoa, from which no fat has been extracted. The artificial gastric juice employed had the following composition:

Benzer's liquor pepticus	20 c c
Dilute hydrochloric acid	12 c c
Distilled water to	100 c c

The experiments are given in detail with compre-

hensive tabular statements, the chief points of which may be recapitulated as:

(1.) All infused beverages retard the peptic digestion of albuminoid food stuffs, with four exceptions, viz.: ham and white of egg with coffee, and fish with cocoatina and cocoa.

(2.) The digestion of the meats ordinarily used at breakfast, viz.: ham, egg, and salt beef, is less retarded by the action of tea and coffee than that of other meats, and the same is true of roast beef.

(3.) That this retarding action is less, as a rule, with coffee than with tea, and less with either than with the beverages of the cocoa order.

(4.) That the retardation is caused (*a*) in the case of "teas" by the tannic acid, assisted by the volatile oil, the former precipitating the uncoagulated albuminoids of the food, and the syntonin and peptones as formed, tanning the gelatinous constituents of the meats, and removing some of the pepsin by entangling it with these precipitates, and the latter retarding the action of the pepsin. The alkaloid of tea appears to assist digestion, but its action is masked by that of the tannic acid and volatile oil. (*b.*) In the case of "coffee" the caffeo-tannic acid and volatile oil retard digestion. and the alkaloid assists it. (*c.*) In the case of the cocoas, the tannic acid, volatile oil and alkaloid all assist in retarding digestion.

(5.) In retarding the consumption of acid during digestion, tea has the greatest effect; coffee has no more effect than water, and cocoa increases the consumption.

(6.) Coffee and cocoa cause the peptic digestion of albuminoids to pass on through the stage of peptones, to the formation of leucine and tyrosine.

(7.) Tea acts on the digestion of fresh meat so as to increase the production of flatus, but has no such effect with salt meat, and coffee has no more effect than water.

(8.) The addition of cream and sugar to the beverage reduces the retarding action of tea on digestion, but increases that of cocoa; and coffee appears to have its action reversed by these additions, but this result is doubtful.

From these experimental results the following practical conclusions are to be drawn:

If at any meal containing much albuminoid matter, infused beverages be drunk instead of water, the person making this meal must either eat more albuminoid matter or be content to suffer that loss. This is, of course, undesirable, for, even if the power of the beverage to reduce tissue waste, were such as to compensate for the albuminoid matter lost, it would manifestly be more economical to take the infused beverage on an empty stomach, and then, when mealtime came, less food would be required.

If flatulence be the chief cause of trouble, tea should be avoided when animal food is eaten; coffee being the best beverage.

If the dyspepsia is of the acid form, tea is the worst, coffee neutral, and cocoa the best beverage, from its increasing the consumption of acid. This would apply to the over-acidity of the gastric juice and to its over-secretion, but if there is any tendency to the lactic acid fermentation, cocoa should be avoided, from the sugar it contains.

In the case of those who habitually eat too much albuminoid matter, which, if absorbed, would have to be eliminated by the kidney as urea, and so might cause gout or some renal complaint, tea would seem to be a useful beverage by its property of preventing the digestion of some part of the food, and causing it to be rejected unabsorbed.

The after-dinner cups of coffee and tea may have their uses, but from a digestive point of view are hardly free from disadvantages. Perhaps the ladies at five o'clock tea have chosen the best time for the consumption of their favorite beverage, for early lunch has had time to have been chymified and to have disappeared from the stomach, and the interval before dinner is long enough to allow of the digestion of the very small amount of solid food which is supposed to be consumed at "kettledrum."

The Work Done by the Heart.—Howell and Donaldson (Proceedings of the Royal Society of London) conclude that the mean ratio of the maximum weight of blood pumped out of the left ventricle at each systole to the body-weight is $\frac{1}{855}$, with a pulse beating 180? The pressure in the left auricle is about 16 mm mercury; Goltz and Gaule had estimated it for the auricle of a dog at 19.6 mm mercury. They state that variations of arterial pressure of from 58 to 147 mm mercury have no effect on the force of ventricular contractions, and within these limits, therefore, heightened blood-pressure does not increase the work of the heart. The outflow from the left ventricle, and consequently the work done, increases with the venous pressure, but not proportionally. The most direct factor influencing the amount of work to be done by the left ventricle is the extent of intraventricular distension during diastole, which is mainly owing to the auricle, since pressure in the great veins seldom has any positive value, but often a negative one. Further, a diminution in the pulse-rate, by lowering the temperature of the blood flowing through the heart, causes an increase in the amount pumped out by the ventricle, and therefore increases the amount of work done by the ventricle. The changes in the outflow from the ventricle at each systole are not, as has been previously stated, inversely as the pulse-rate. The total outflow and the total work done by the ventricle during any given period of time, decrease with a diminished pulse-rate, and increase with an increased pulse-rate. These facts have a definite bearing on practical medicine. The experiments were conducted on dogs.—*Medical Times and Gazette.*

The New York Post-Graduate Medical School, about February 1, intend to move into new quarters on 20th Street, between 2nd and 3d Avenues.

The new building is especially adapted for a hospital and school combined, and is in a convenient neighborhood to the medical centers.

The school has been well patronized during the past year.

THE

Journal of American Medical Association.

PUBLISHED WEEKLY.

THE EDITOR of this JOURNAL would be glad to receive any items of general interest in regard to local events, or matters that it is desirable to call to the attention of the profession. Letters written for publication or containing items of information, should be accompanied by the writer's full name and address, although not necessarily to be published. All communications in regard to editorial work should be addressed to the Editor.

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BUFFALO, Jan. 21, 1884.

THE EDITOR OF THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION, CHICAGO.

Dear Sir:—Your editorial upon signing the constitution, etc., of the A. M. A., leaves something of the peculiarity of the affair unexplained.

As you quite properly say, "every *member elect* is required to sign these regulations."

That this is the rule, and wisely so, to my knowledge was never questioned. But that this rule authorized the local committee, or the Judicial Council, or any other body, to exact from *permanent members* such a pledge as was made prerequisite to registration at the late meeting I very much doubt, and upon this important point your editorial is peculiarly silent.

Perhaps the term "member elect" is used with a significance quite apart from the ordinary, and possibly it may require the official interpretation of the Judicial Council to determine who are members and who members elect. But to those who give the words their usual meaning the fact remains that there was imposed upon the permanent members at the late meeting of the A. M. A. a restriction and form intended for *members elect* only, and therefore that this restriction upon the *permanent members* was unauthorized, and, being so, was liable to be severely characterized.

As to the meaning of the term, or rather as to what is included in the term "these regulations," it may be of interest to discuss at some future time. At present it would seem to be desirable to ascertain, and as you have introduced this subject in a prominent manner I trust that you will give the required information, as to who may be the *members elect* of the A. M. A. With the hope that you may find room in the THE JOURNAL for this note, I remain a permanent member,

H. R. HOPKINS.

The writer of the foregoing letter suggests three questions, namely, first, who are "members elect," as these words are used in the last paragraph of the plan of organization or constitution of the American Medical Association relating to *members?* Second, what is included in the words "these regulations" as used in the same paragraph of the constitution? Third, had the local Registration Committee, or any other authority, the right to exact of permanent members a pledge endorsing the constitution and Code of Ethics of the Association as a condition of registration?

It is always a pleasure to aid those who are seeking relief from either mental doubts and embarrassments or physical infirmities, consequently we will do what we can to remove any doubts concerning the questions suggested by our correspondent. It must be kept in mind that the paragraph in which the words "members elect" occur is a part of the second section of the constitution defining who shall be members of the Association. The section provides for three classes of members, *i. e.*, delegates, permanent members and members by invitation. The first are to be elected annually by State and local medical societies and from the medical corps of the Army and Navy, and from the Marine Hospital Service. The second embraces such as have been not only *elected* but have *served* as delegates at least once, or have been elected directly by unanimous vote of the Association. The third, or members by invitation, are also elected, but only as members for the meetings of the session at which they are elected. It will be seen that there are no members of the Association except such as are primarily elected to that position. Consequently, all members are in the strictest sense "members elect." One class are recently elected to represent some organized part of the profession and are called delegates; another, having been elected and served their time as delegates remain as permanent members so long as they comply with the regulations of the Association. The exact question raised by our correspondent is, whether the words "every member elect," mean all the members provided for in the section of the constitution relating to members, or only those newly elected as delegates? The whole paragraph in which the words in question occur is as follows:

"Every member elect, prior to the permanent organization of the annual meeting, or before voting on any question after the meeting has been organized, must exhibit his credentials to the proper committee, and sign these regulations, inscribing his name and address in full, specifying in what capacity he attends,

and, if a delegate, the title of the institution from which he received his appointment."

If the reader remembers that the preceding paragraphs of the same section had practically provided for two classes of members, one directly representative of some organization and called delegates, and the other permanent members, and then reads carefully this paragraph, he cannot fail to see that the phrase, "every member elect," actually includes every member presenting himself for admission or registration; else why, after requiring him to "sign these regulations," require him also to "specify in what *capacity* he attends, and, *if a delegate*, the title of the institution" he represents, etc.? This phraseology clearly implies that "every member elect" applies to those attending in more than one "capacity," and even more clearly, that it applies to members who are not delegates, as well as to those who are. Otherwise the words, "if a delegate," would be both superfluous and senseless. There is, therefore, no escape from the conclusion that signing of the constitution and by-laws is a requirement of the constitution, to be executed as one of the conditions for registration or admission to the annual meeting, binding alike upon all members, in whatever *capacity* they may attend, with the additional obligations upon those claiming to be delegates that they specify "the title of the institution from which they received their appointment."

In regard to the second question suggested by our correspondent, relating to what is properly included in "these regulations," it is only necessary to turn attention to the closing words of the resolution by which the whole plan of organization was adopted in the adjourned convention of 1847, and which is published as a part of the preface to the constitution and by-laws in the several volumes of Transactions of past years. That they refer directly to the constitution and by-laws adopted for the government and practical working of the institution there can be no doubt. That the Code of Ethics constitutes a part of "these regulations," is so obvious from the use made of it in the fourth paragraph of Section II of the constitution and in the ninth by-law, that there is little room for any doubt on the subject. The third question suggested by our correspondent, regarding the *right* of the registration committee to exact of permanent members the same endorsement of the "regulations" as they do of delegates, is settled in our answer to his first. Instead of having adopted a new rule operating restrictively upon the rights of permanent members, at Cleveland, the committee only resumed the execution of a plain constitutional duty, which had been neglected by the committees of several preceding years. As every permanent member must have been *elected* to his position primarily, and it is conceded that when so elected it was highly proper that he should endorse the "regulations" of the Association by his signature, we fail to see how the repetition of that signature every time he returns for admission to an annual meeeing works any possible "restriction" upon his rights or privileges. We can conceive of only one condition in which it might cause him some *embarrassment*. If he had so far forgotten the ordinary principles of consistency and honor, as to have entered into another organization, and lent his direct aid and endorsement to rules, regulations, and ethics antagonistic to those of the Association, we can readily see how he might feel somewhat embarrassed when called upon to re-sign those of the latter. Riding two horses at the same time, with the animals going in opposite directions, is very generally acknowledged to be a feat likely to give the rider much embarrassment.

The paper on the Treatment of Strictures of the Urethra by Dr. Reynolds, contained in this number of The Journal, failed to appear with other papers read before the Surgical Section of the Association, through an accidental omission of the Secretary of the Section to make any mention of the paper in his minutes.

The paper in this number on the history of legislation, concerning the disposal of the bodies of the dead, and the making of proper legal provisions for dissections in the study of anatomy, surgery, physiology, etc., was written by one educated in both law and medicine.

The news comes to us from over the sea that Mr. William Bowman is to be made a baronet. As the *Medical Times* says, men who are now thinking of retiring from practice, when they were students read no physiology but Todd and Bowman's. It is more than forty years since he was awarded a Royal medal by the Royal Society. Then it was quite probable that he would become the leading London surgeon, but he confined himself to the limits of eye-surgery.

Among the gentlemen recently admitted, after examination, to the Fellowship of the Royal College of Surgeons of England, was Dr. W. B. Platt, of Baltimore, U. S. He is the first native of the United States who has obtained this diploma. Subsequent to his course of study in the Harvard Medical School, Boston, he studied at Vienna, Berlin, Halle, Würzburg, Heidelberg and London.—*Lancet.*

SOCIETY PROCEEDINGS.

CHICAGO MEDICAL SOCIETY.

At the regular meeting held January 21, 1884, Dr. C. G. Davis read an original paper on the action of "Gelseminum Sempervirens," recording his experience during a number of years of observation, and which contains many points of interest. His preliminary remarks were substantially as follows:

The present advanced state of medical science is due in a great measure, if not entirely, to the recorded experience and observation of thinking men. If this be true, would it not be well if all physicians engaged in the active practice of their profession would make a special endeavor to observe more closely, and record more accurately, the various symptoms manifested by the action of medicine on the human system? A neglect of this on the part of many physicians has given rise to what we may properly term the "school of skepticism." They disbelieve entirely in the action of medicine to relieve disease, and often, while manifesting a sublime indifference to the appeals of the poor sufferer before them to be relieved, they go into ecstacies over the pathology of the case, and are plethoric with theories in regard to the ultimate nerve cells or molecules wherein the disturbing action arises. Be it understood, I cast no reflections upon scientific investigation in these directions, but the true office of the physician is to prevent, cure, or alleviate disease, and inasmuch as he fails in this, he fails to fulfill his mission. Regarding gelseminum sempervirens, first described in 1640 by John Parkinson, who cultivated it in his garden, for a full description of the plant see the various dispensatories, works on botany, etc. The subjoined anecdote may serve its purpose: Some one has stated that the *medicinal* action of this remedy was discovered by accident. A Southern gentleman, who was sick with a fever, sent his colored servant into the garden to obtain the roots of a plant which he indicated, in order that he might prepare a decoction for himself and alleviate his disease. The servant made a mistake, and obtained, instead, the roots of the "yellow jessamine." The tea was drank, however, and the patient breaking out into a profuse perspiration, and recovering so soon from the fever, made inquiry as to what he had taken, and was so delighted with the result that he immediately recommended it to others who were similarly afflicted. However true this may or may not be, gelseminum owes its medicinal action to the presence of an alkaloid, the active principle gelsemina or gelsemia, and to Professor T. G. Wormley undoubtedly must be given the credit of having first isolated the alkaloid, and also demonstrated the presence of a new organic acid, which he designated gelseminic acid, of which by his process he was able to procure about 2¼ grains of the pure acid from 16 ounces of the fluid extract. The alkaloid gelsemia exists, approximately, 1 grain in 2½ fluid ounces of the fluid extract, and it is so intensely bitter that its presence to the extent of 1-1000 part by weight in solution can be readily detected.

Its physiological actions. When taken into the system it is rapidly diffused in the blood, and when administered in small quantities, sufficient to produce a sensible effect, it has a mild, soothing tendency over the nervous system, manifested by mental quietude, a tendency to drooping of the eyelids, slight muscular relaxation, slowing of the pulse and slight dilatation of the pupil, though Prof. Ringer says this dilatation is preceded by contraction of the pupil. When the dose is much increased the symptoms are all intensified, and we see manifested double vision, giddiness, pain in the forehead, increased paralysis of the levator palpebræ muscles, causing drooping of the eyelids, labored respiration from partial paralysis of the respiratory muscles, muscular weakness, and general sensibility is much reduced. If the dose is still further increased, the symptoms are still more intensified, the action of the heart becomes weak and intermittent, vision becomes entirely lost, pupils widely dilated, not responding to the action of light, consciousness may be retained until near the period of death, when it is lost from the carbonic acid poisoning resulting from incomplete respiration. The action of the heart continues for some moments after respiration has ceased. From these symptoms it is evident that the prime action of gelsemia is upon the nervous system, and its action is such as to warrant us in classifying it as a cerebro-spinal depressant, acting principally upon the motor centers, although some discussion has been held that its primary action is upon the peripheral extremities of the motor nerves. Ringer at one time entertained this view of its action primarily upon the extremities of the motor sensitive nerves. In cold-blooded animals its first effect is on the sensory center, while in warm-blooded animals the motor centers are first impressed. The reader of the paper considered this fact to be of great importance, viz.: that the remedy lowers the temperature, which he had verified in many febrile and inflammatory diseases. The theory of it being an efficient antidote to poisoning by strychnia, was according to the views expressed by the writer disproven, as was illustrated by experiments on dogs, and the contrary effect he was satisfied to announce, was the result *that it facilitated or increased the action of strychnia.*

Two dogs were selected, weighing ten pounds each, to both was administered at the same time one-fifth of a grain of sulphate of strychnia hypodermically. Five minutes elapsed, and one-eighth of a grain of the alkoloid gelsemia in the form of a sulphate was given to one of the dogs. In ten minutes convulsions appeared in this animal, while the effects were not noticed in the dog that received only the strychnia until the end of thirteen minutes. In thirty minutes the animal that had received both poisons was dead, while the other lived forty minutes, and then, too, it was noticeable in the experiment that in the animal receiving both the strychnia and gelsemia the convulsions which appeared earlier were far more violent and continuous. This experiment was repeated a number of times with almost unvarying results. As antagonistic to and incompatible with the effects of gelsemium, we may rely upon alcoholic and diffus-

able stimulants, and as an illustration, a case was cited that the author treated three years ago.

J. B., æt. 45, had been afflicted with muscular rheumatism for a number of years, was given five drop doses of the fl. ext. gelsiminum three times a day, with instructions to increase the dose one drop every day. In time he reached a dose of twenty drops per day, and, not seeing any of the usual effects of such a dose, I requested him to change his druggist. In two hours after acting upon this advice the patient was brought back to me by a worthy officer, who found the gentleman staggering on the street and supposed him intoxicated, as he showed to a very marked degree the effects of the remedy. A tablespoonful of brandy was at once administered. In fifteen minutes he was much improved. The same dose of the stimulant was repeated twice during an hour, at the end of which time the symptoms had entirely disappeared. This case serves to illustrate the antidotal action of alcoholic stimulants to the poisonous action of gelsemium; also, what is true of many other of the fluid extracts, their entire worthlessness as to medicinal action.

Therapy. In its native Southern region it has for many years had an extensive reputation as a remedy of great value in the treatment of autumnal malarial fevers. While its efficacy in this direction may have been over-estimated, yet its beneficial effects in malarial fevers are such as to merit our careful consideration. After an observation of a number of years, and administering the remedy to probably many hundreds of cases, I have arrived at the following conclusions: First, gelsemium is not a direct antidote, either chemically or physiologically, to malaria. Second, it does have a wonderful effect over the disease, owing to the relaxing influence it brings to bear upon the system, thereby increasing excretion and assisting to eliminate morbific matters. Third, it may be regarded as the great adjuvant of the salts of cinchona and in this direction, so far as malaria is concerned, lies its chief merit. The following typical case, of which the principal points only are here given, illustrates this action. A sign painter of "bilious temperament," sallow complexion, and melancholy expression of countenance, had ague at intervals for three years, of which the smallest amount of *quinine* or any other of the salts of cinchona produced unusually severe cerebral symptoms. Was called to see him while he was seized with a terrible "chill," simulating the congestive form; he refused the treatment that was suggested, and in forty-eight hours he was again prostrated with another more severe attack; when called to him again he was partially unconscious in a congestive chill. After three hours hard work, with diligent use of stimulants, external heat, etc., reaction began. During the febrile stage the fl. ext. of gelsiminum was given freely, reducing the temperature and producing symptoms denoting its other effects. After eighteen hours had elapsed ten grains of quinine were given every two hours till 120 grains had been given. Not a symptom of tinnitus aurium was manifested, nor any other unpleasant symptom was noticeable. There has been no return of the disease from that day to this, so far as is known. This is only one of a number of cases where the remedy was given to prepare the system for the action of quinine.

In convulsive diseases, particularly those where the spasm is dependent upon reflex irritation, this remedy satisfactorily fulfils the indications, especially in the various diseases of childhood where convulsions are manifested. The following illustration may not be devoid of interest: Willie S., aged 8 months, at supper partook of milk and mashed potatoes. The child was soon seized with convulsions, because the stomach failed to digest its contents. In three hours' time there had been twenty convulsions according to the statements of the attendants. Upon arriving two drops of the fl. ext. were immediately given to the child, and in ten minutes two drops more. Then ten drops were prepared in four ounces of water, and a teaspoonful of this was given every hour for twelve hours longer. No more convulsions appeared, and the next day the child was convalescent. No other remedy has such a satisfactory effect on the nervous system of a child during the period of dentition, while the entire system is disturbed from irritation of the distal extremities of the fifth pair of nerves.

As a remedy for *meningeal inflammation* of the brain and spinal cord, its efficacy in this class of cases the reader illustrated by citing a case selected from a number of similar ones that had from time to time been under his observation, and the large amount of the remedy that may be borne when the nerve centers are excited.

When called to the bedside, the case (that of a young man) had already progressed four days; his temperature was high, pulse rapid and small, tongue dry, mind wandering and there was severe spinal tenderness, the slightest disturbance in the room or jar of his bed resulted in severe convulsions, which amounted to opisthotonos, occurring once or twice every hour. Bromides in large doses had already been given. The fl. ext. of gelsemium in five drop doses was then administered every hour for three hours, at which time another convulsion came on. Ten drops of the remedy was then ordered every hour. In three hours there appeared slight symptons of another convulsion. The dose was increased to twelve drops and gradually to fifteen drops, given as often before there was entire relaxation and disappearance of all convulsive action. This dose was maintained for several hours before any toxic symptons began to be manifest. The patient was then continued under the influence of small doses for a week longer, and later he recovered. Gelsemium has been lauded as a remedy for tetanus, but the author is convinced that it is of but little use in this condition. It has no effect given alone over epilepsy, but added to bromides a desired result may be obtained, more immediately and permanently in controlling cases of epilepsy confined to children.

The writer doubts its efficacy in cases of tic-doloreux or neuralgia, and thought it quite possible that the successful cases treated by the remedy by others were not tic, but neuralgia resulting from cold, or some other eccentric causes producing congestion. Given in pneumonitis and pleuritis it is beneficial,

and will lessen or retard the inflammatory conditions by lowering the temperature, lessening the pulse rate, and it has a soothing effect over the respiratory function. It has a marked effect over the mucous surfaces in gastro-intestinal catarrh, dysentery, and inflammatory conditions of the urinary organs. In rattlesnake bites no other remedy yielded such results, while the author was living in Kansas some twelve years ago, when he treated a number of these cases. The local inflammation and pain rapidly subsided, and convulsions ceased after giving a few doses. Favorable reports from several physicians to whom the remedy was suggested, verify this. The remedy is given internally and applied locally, and in these cases its action doubtless is entirely physiological and not chemical.

In diseases of women, of which a variety were enumerated, he discussed the application of the remedy to pelvic disorders and their attendant nervous disturbances, and it applies with equal force to both the acute and chronic states, for it possesses a relaxing effect over the uterus and its appendages. In the first stage of labor where there may be present a rigid and unyielding os, a similar administration will produce many times a most happy effect. In many forms of dysmenorrhœa its beneficial effects are equally noticeable. The author pictured many typical cases classified under the head of nervous diseases; long continued congestions of the pelvic viscera; various phases of hyperæmia and anæmia of the spinal cord; hysteria; spinal irritation; neuræsthenia, etc., that were treated by all known therapeutical measures, local treatment, and while he did not claim it to be a never failing remedy—a panacea—for all these conditions, he held that a large number of female diseases could be relieved by this remedy. In using it for a number of years, continued the writer, he was prepared to positively assert that gelsemium is a stimulant or tonic to the cerebro-spinal system when long continued in small quantities. Three chronic cases were cited of local troubles (ulceration) with serious nervous disturbances, in which all were relieved by taking minute doses of the remedy. The first was where the patient had been treated for endocervicitis, retroflexion, retroversion, ovaritis, peri-uterine trouble, etc., and menstruation had ceased. She was 35 years of age; all the functions were gradually restored, and in eighteen months she gave birth to a perfectly healthy child, since which time her health has been perfect. Case second was a remarkable one. A patient aged 45, with a decidedly neurotic history. There was hemi-anæsthesia, but this was not due to any cerebral lesion, there was ovarian tenderness, bowels constipated, frequent micturition, bearing down pains, uterus enlarged and retroverted; she suffered severely with dysmenorrhœa, and sometimes the menses did not appear at all. She was approaching the turn of life; had been married twenty years, but she had never been pregnant. Her improvement was gradual and continuous by taking small doses of gelsemium, and in six months she appeared entirely well, menstruation being regular and normal. In three months longer she called again, for she was afflicted with nausea, and felt, as she expressed it, "so very strangely." Could she have conceived? Yes, possibly, and in due time "the wife and son were doing well," was the message sent me. Thus the pathological condition was removed, menstruation had returned and pregnancy occurred at the age of 44 years.

The last case, that of a lady, aged 46, consulted the writer some four years ago; her case presented a number of interesting features. For eight years she had been in a decline, and she became reduced in weight to seventy-five and a half pounds. During the past five years she had been treated for typhoid fever, which she had an attack of and continued for five weeks. She had been treated also for sciatica, bronchitis, ulceration of the intestinal canal, disease of the pylorus, cirrhosis of the liver, diseased kidneys, hyperæmia of the brain and the various flexions, versions and inflammation of the uterus. My diagnosis was told her facetiously, perhaps, saying that she was "sick." There was a general failure of nutrition, restlessness, frequent attacks of neuralgia, depression of spirits, spinal tenderness, enfeebled digestion and backache. Her menstruation had been very scant and irregular for two or three years, and it had not appeared for seven months. The gelsemium was given to her in minute doses. She began to improve almost immediately. At the end of the third month menstruation reappeared, much to our surprise. In four months she gained twenty pounds. She increased in weight thirty-five pounds in a few months longer, as also in strength, and menstruation still continues at the age of almost 50 years. As a remedy for nocturnal emissions it was simply referred to in the paper.

For "algies" and other disorders, it was also alluded to. The writer stated the following, in conclusion: This remedy, if it has any influence over the pelvic viscera which is directly due to an impression on the spinal cord, or upon the sympathetic ganglia, is doubtless a matter of some question, but it is highly probable that it has a tonic effect on the sympathetic ganglia, as well as the cerebro-spinal centers, and urged that the action of gelseminum over the disorders peculiar to women was a subject of great importance, and well worthy the attention of the profession. For a very large number of the pelvic disorders of women arise from a disturbed nervous system, which in turn produces morbid ovulation. It is in this way that I account for the action of gelseminum on these disorders. Its action is directly on the nerve-centers—spinal and sympathetic—equalizing the circulation and giving tone to cell power, and by these means permitting free ovulation and relieving the congested and inflamed condition of the other pelvic viscera. If it does have this action, then Dr. Davis propounded the question, may it not also be considered a remedy for sterility?

The merits of the paper were discussed by Drs. G. C. Paoli, A. H. Foster, L. H. Montgomery, R. Ti ley and C. G. Davis, after which Dr. R. Tilley read a paper prepared by Dr. E. F. Ingals, giving a report of A Case of Catarrh Caused by a Large Cystic Tumor, with Removal and Recovery.

Mr. V. had suffered from catarrh more or less for

the past ten years, and had been especially troubled during the past six months. There was difficulty in breathing, and obstruction to the left nasal passage, being able to inhale by considerable exertion, and unable to exhale at all through that side. His hearing was also impaired. His general health is excellent.

Upon inspecting the naso-pharynx by means of the rhinoscope, a smooth, grayish-white tumor was noticed, completely occluding the posterior orifice of the left nares, and filling two-thirds of the naso-pharyngeal cavity, which evidently sprang from the lateral wall of the pharynx, in the region of the fossa of Rosen Müeller.

An attempt was made to remove the growth with a modification of Jarvis' écraseur armed with a fine steel piano wire. After several trials, I found myself unable to pass the loop over the growth, on account of its great flexibility. A larger wire was then substituted, and aided by the rhinoscope, the growth was secured and finally detached; it fell into the mouth, and was ejected by the patient. It measured 1⅜x1⅛ inches in the largest diameter, and ¾ of an inch in thickness. A microscopic examination of the tumor was made by Dr. E. P. Davis, who pronounced it to be a mucous cyst. No after-treatment was deemed necessary.

Careful examination of cases of so-called catarrh should be made, as many are due to nasal polypi, hypertrophied turbinated tissue, adenoid vegetation in the naso-pharynx, or tumors.

The pathological specimen was then exhibited, and remarks passed upon it. L. H. M.

NEW YORK NEUROLOGICAL SOCIETY.

Stated meeting January 8, 1884. Dr. William J. Horton, President, in the chair. Notes on the use of the menthol cone as an anodyne.

Dr. E. C. Wendt showed a little contrivance, called by the Germans "*Migräne Stift*," and explained the method of its application and uses. It consisted of a piece of menthol molded into a conical shape, and secured in a little wooden box, closed by a cover to prevent evaporation, soiling, and breaking. It seemed to be very little known here, although it was much used abroad, especially for sick headache.

His attention had been first directed to the anodyne properties of menthol by a short notice published in the *Medical Record*, of April 28. 1883, by Dr. Cammann.

That gentleman had recommended an alcoholic solution of menthol (℥j. to ℥ss. alcohol), to be painted over the affected parts. Dr. Wendt had since that time often used this solution, and found it a rather reliable anodyne.

Its pain-relieving action was restricted, however, to the slighter ailments, especially those of a neuralgic character. Since his acquaintance with the solid menthol cone, he had frequently substituted the direct application of menthol by means of the latter for the solution formerly employed. He would admit that the only advantage which the solid cone or pencil had over the solution, consisted in the greater simplicity of it application, its ready portability, and the fact that its vapor was not apt to irritate the eyes of susceptible patients. He had repeatedly heard complaints in that direction from ladies, regarding the solution, which was obviated by using the cone.

In this country menthol had not yet received that amount of recognition from the profession to which its pain-obtunding properties would seem to entitle it. In fact, little seems to be known about it, and for this reason Dr. Wendt thought it might not be amiss to quote a descriptive notice which had appeared in the *Midland Medical Miscellany*, of October, 1883:

"Menthol, or menthylic alcohol, $C_{10}H_{20}O$, is a crystalline substance, deposited from the oil of peppermint, prepared in China and Japan from *menthæ arvenses var. piperascons* and *glabrate*."

It formed the chief ingredient of a much valued remedy for neuralgia, before its nature or source was generally known. Under the name of po, ho, yo, or *gouttes Japonaises*, it has been sold in small bottles, labeled with Chinese characters.

It is a white crystalline stearoptene, melting when pure at 97° Fahrenheit, and is obtained by the Japanese from the oil of peppermint, by submitting it to freezing several times in succession, until no more menthol crystallizes out.

It is also said to be contained in the American and English oils of peppermint, but probably in small quantities only. It is somewhat surprising that the Japanese peppermint plant, which is grown in England as a curiosity, has not been cultivated in that country, as a source of the drug, the supply of menthol being uncertain, the demand great, and the price, in consequence, occasionally very high.

Menthol is said to be sometimes adulterated with crystals of Epsom salts, to which it bears a great resemblance. These being insoluble in alcohol or chloroform, in which fluid menthol is freely soluble, can easily be detected. Samples of fine crystals sometimes contain essential oil, adhering to them, a fact which must be taken into consideration when the menthol is made into cones or pencils.

Menthol is but slightly soluble in water, although imparting a strong odor and taste to that liquid, and is soluble in aqueous alkalies. It is soluble in fixed and volatile oils, and in ether.

Although Dr. Wendt's experience with menthol had not yet been a very extended one, it had nevertheless been sufficient to convince him of the utility of the drug in a rather large class of cases. Thus, as already stated, he had found it a pleasant and reliable anodyne in all the lesser neuralgias, and especially in those so frequently occurring about the face. But it was also serviceable in many painful affections due to inflammatory processes. For example, in mumps, in the cervical adenitis so often accompanying sore throat, and in numerous other affections, where pain was a prominent symptom, menthol might be used to advantage. With regard to its topical action, it was similar to that of aconite, over which it had the advantage of not being poisonous.

Dr. Wendt remembered one rather striking case of

quite severe supraorbital neuralgia, which refused to yield to the oleate of aconitia, but was much benefited by the menthol. But, on the whole, in violent attacks, he had found it almost useless. In typical migraine, for instance, where the pain was at all severe, and in all deep-seated aches of more than very moderate intensity, it had no appreciable effect, except, perhaps, the indirect psychical action of distracting the sufferer's attention.

In the discussion which followed these remarks, Dr. Roberts asked Dr. Wendt if he had tried the prolonged application of menthol.

Dr. Wendt said that he had in some cases of hemicrania, though without decided benefit. Nevertheless, the patients experienced a pleasant sensation of coolness of the surface, followed by a feeling of agreeable warmth.

Dr. Norton desired to ask Dr. Wendt in what sense he used the word anodyne. Dr. Wendt said in the usual one, of affording relief from pain by blunting sensibility.

Dr. Norton thought that menthol probably acted more after the manner of counter-irritants, by insuring relief in a reflex rather than directly local way. Mustard was a typical peripheral nerve-irritant, and it seemed to him that the action of menthol could be best explained on the same principle, of procuring peripheral nerve-impressions in a reflex way.

Dr. Horton continued, that his attention had been first called to the menthol-cone by Dr. Wendt. He chanced to be at the latter's office one day when suffering from a headache. A few strokes of the menthol gave him at once a sense of relief. He felt the effects of the peppermint to be as gratefully cooling as the application, say of cold metal. In brachial neuralgia, as well as sciatica, he had been pleased with the good effects of the menthol. He thought the drug was deserving of further trials.

Dr. Ralph L. Parsons then read a paper on Detention in Asylums.

The reader spoke first of the question, whether sane persons were not often improperly or unjustly detained in asylums for the insane; and secondly, whether many uncured and incurable patients who were methodically detained in asylums might not advantageously be returned to their relatives, or placed in the care of private families under State supervision.

It was assumed in the first instance, that the detention of patients after recovery had taken place, for a longer time than might be required, was quite possible, and even probable in some instances. But he claimed such detentions were not usually of serious import to the patient; that on the other hand, too early discharge might be more injurious. It was also admitted that maliciously unjustifiable detentions were quite possible, as any other sort of injustice is possible on the part of persons holding positions of power and responsibility. But reasons were urged by Dr. Parsons, in support of the belief that such malicious detentions were at least very rare, that sentiments of honor and professional pride were strong deterrents, to say nothing of the great danger of detection in the commission of the wrong, and the ease with which patients who were decidedly insane obtained their enlargement through the intervention of the courts.

Cogent reasons were given why various classes of convalescents ought to remain under asylum care for a period of time after they appeared to be well, as, for instance, when they would be immediately subjected to the exciting cause of their insanity on their return, when the progress toward convalescence had been characterized by relapses, or when dangerous delusions had been entertained, and had faded away so gradually that there were difficulties in judging whether they had passed away entirely.

But, on the other hand, the discharge of certain uncured curables before they were well was advised, as when, after making a certain degree of improvement, this improvement stopped and the patient seemed to retrograde. It might be safe and highly advisable to discharge some of these patients before they were well.

The major part of the paper was devoted, however, to an advocacy of the discharge from the asylum of harmless incurables, and their return to the care of their friends, or placing them with ordinary families as boarders, and in some sort as members of the families. It was claimed by the reader that, however comfortable and happy such patients may appear to be in large asylums, there are many causes of annoyance and discomfort that would not be experienced in ordinary family life; that, notwithstanding the fine buildings they occupy, and their freedom from care, they are still prisoners, and exposed to many disagreeable associations and associates.

Quotations were made from Dr. Bucknill and from Dr. Maudsley, strongly supporting these views.

The question was then considered, what classes of incurables might safely and with benefit be released from asylum restraints. Since in the case of a great majority of such patients, moderate cost of maintenance would be essential, those only would be adopted who were quiet and orderly, and would require no especial attendance or supervision. Habits of industry would be favorable.

Whether such patients would do better with their relatives or with strangers would depend on the circumstances of the family, the state of health, the surroundings, the feelings or notions of the patients, etc. It would be found, however, that many patients who would not do well with their own kindred, would be happy, contented and useful with congenial strangers. It would be impossible for the patient to resume his former position and influence in his own family, and hence he would be subjected to irritating restrictions and annoyances there.

As a preliminary measure, a system of legalized furloughs was advocated, to the end that at first the patient might still be under legal restrictions and easily returned to the asylum, if the trial at large should prove a failure.

Properly constituted authorities should make the selection of patients for the trial, with the assistance and under the advice of the asylum superintendent.

The families in which the patients should be placed should be selected with great care. While at first there might be found very few suitable families who

would assume the charge, it was thought that, when a beginning had been made, plenty of suitable homes would be offered. Reference was made to the multitude of respectable and responsible families who take summer boarders for a moderate compensation and the probability that some of these families would prefer one or two permanent patient boarders to a number of sane boarders for a short season during the busiest portion of the year. A suitable system of visitation and of reports was advocated. The paper closed with the following summary of conclusions, to-wit:

1. That inasmuch as many recoveries take place in asylums for the insane, it is to be expected that some convalescent patients may at any time be found in the wards.

2. That while possibly now and then a convalescent may be detained on probation an unnecessary period of time, such cases are not of frequent occurrence, nor important in their consequences when they happen, and that when they do occur, the detention is very rarely indeed through criminal intent.

3. That many harmless incurables are unnecessarily detained in asylums for the insane; that these incurables would be happier in the enjoyment of ordinary family life and associations, and that systematic efforts should be made to secure their enlodgement and their establishment under family care.

4. That under certain circumstances curable patients should be removed from asylum restraints and associations while yet uncured.

Owing to the lateness of the hour the discussion upon Dr. Parsons' paper was postponed until the next meeting of the society.

BOOK REVIEWS.

THE PATHOLOGY AND TREATMENT OF VENEREAL DISEASES. By FREEMAN J. BUMSTEAD, M.D.,LL.D., late Professor, etc., etc., and ROBERT W. TAYLOR, A.M.,M.D., Professor, etc. Fifth edition. Revised and re-written, with many additions by Dr. Taylor. Pp. 906. Philadelphia: Henry C. Lea's Sons & Co. 1883. (Jansen, McClurg & Co., Chicago.)

In the production of the late Prof. Bumstead's fourth edition of his well known treatise on venereal diseases, Prof. Robert W. Taylor, A.M.,M.D., of the University of Vermont, acted as collaborator, with the distinct understanding that upon the death of either colleague the work should "revert to the survivor as his book, to be by him re-written, revised, or enlarged, as circumstances should require," in keeping abreast of modern discoveries.

The book before us is the fifth edition of this now celebrated work, practically re-written since the death of Prof. Bumstead.

As it now appears it is a valuable standard treatise, and one which reflects impartially the best modern opinion, a thoroughly reliable work of reference for practitioners.

The preparation of such a standard work is one of great labor, involving the study of recent medical literature in all the modern languages, and incessant study in collating the results of new physiological and pathological discoveries.

Even the preparation of a new edition, brought down to the most recent knowledge, is an editorial task requiring months or years for completion. The mere collecting and perusal of all the monographs which appear in a few years in all parts of the world, on so wide a subject, would require almost more than one man's time, while the digesting and summarizing of this diverse material, and its incorporation into the old work, would seem to call for the united labor of a corps of writers.

Prof. Bumstead, in a previous edition, recognizing this difficulty of keeping pace with so wide a subject, says: "So many specialties had sprung up within this one specialty, that the labor involved in issuing a fourth edition of this work was recognized as formidable, and even sufficient to afford some ground for the assertion made by one well versed in the subject, that 'in the future it will be impossible to include venereal diseases in a single treatise; they can only be studied and known in separate monographs.'"

From the nature of this work, which may be termed encyclopædic, we are not led to expect, nor do we find, so great originality and incisiveness as in Prof. Otis' so-called "Clinical Lessons" on venereal diseases.

The student and practitioner may put the utmost reliance in the work as it now stands, as containing a faithful exposition of modern ideas and discoveries, such as no other published work supplies.

CLINICAL CHEMISTRY. By CHARLES HENRY RALFE, M.A., M.D. Illustrated. Published by H. C. Lea's Son & Co., Philadelphia. (Jansen, McClurg & Co., Chicago.)

This books forms one of the manuals for students of medicine which are being now issued by H. C. Lea's Son & Co. The volumes are most convenient in size and attractive in appearance. The one before us is an excellent work. Its title does not give a fair idea of its scope. The author considers the chemistry of physiology as well as that of pathology. For example, in the chapter on morbid conditions of the digestive secretions, he takes up one after the other, describing their chemical and physiological action, as well as the changes that may occur in them when affected by disease, and also methods of detecting such changes. A better idea of the scope of the work can be given, perhaps, by quoting the heading of paragraphs in this chapter: Saliva; Detection of Mercury in Saliva; Gastric Juice; Reaction of the Gastric Juice; Pepsin; Peptones; Vomited Matters; Determining Amount and Nature of Acid Present in Vomit; Detection of Poisons in Vomit; Gases in the Stomach; Bile and Jaundice; Uræmia; Bile Pigments; Bile Acids, Fats and Salts; Biliary Calculi; Functional Derangements of the Liver; Diabetes; Lithæmia; Pancreatic Juice; Intestinal Digestion; Fæces; Intestinal Concretions; Gases in Intestines; Detection of Arsenic, Antimony, etc., in Viscera; Estimation of Nitrogen.

The work, therefore, gives concisely very much of chemical physiology. It is clearly and well written. It is worthy of careful study, not only by students but by practitioners. The contents are treated of under the following heads: Organic and Inorganic Constituents of the Animal Body; Chemical Reactions of the Chief Organic and Inorganic Constituents; Blood; Chyle; Lymph; Milk; Morbid Conditions of Urine; Morbid Conditions of the Digestive Secretions; Morbid Products.

SAINT THOMAS' HOSPITAL REPORTS. New Series. Vol. XII.

This handsome volume contains a number of valuable articles. Dr. William M. Ord, under the head of Some Clinical Aspects of Glycosuria, discusses it in association with, 1, conditions of nerve disease or disorder, appearing either as probable causes or as associated troubles; 2, gout; 3, errors of diet; 4, albuminuria, placing these in sequence in accordance with their relative importance.

Mr. F. Le Gros Clark, in giving Some Records of Surgical Experience, discusses a great variety of subjects in his masterly manner. Thus, forty cases of lithotomy are briefly reviewed, the operation for hernia is discussed, and a woodcut of a "guarded knife" is given, which likewise acts as a director.

John Croft gives two cases in illustration of the Treatment of Cancerous Obstruction of the Œsophagus by Permanent Catheterism.

Mr. G. Gulliver records Two Cases of Ulcerative Endocarditis Following an Attack of Acute Pneumonia.

Dr. W. B. Hadden treats of Paraplegic Rigidity in Hemiplegia.

Dr. W. H. Stone of Some Effects of Brain Disturbance on the Hand-writing, giving three cases of agraphic modifications, one of which is peculiarly interesting, as existing in his own person, and the result of sustained mental effort, and probably some indiscretion in the use of chloral. He was enabled, after the lapse of three weeks, to make his own diagnosis, which was that of syphilis, with which he had been inoculated in his hospital duties ten years before, but which diagnosis, he thinks now, was erroneous. The article is well worth perusal, from its admirable style and the thoughts it gives rise to.

Dr. Felix Lemon furnishes remarks upon the cases occurring in the throat department of the hospital, detailing specially interesting cases, and giving short tabular statistics of the whole material of the department. He speaks very highly of iodoform as a local remedy in laryngeal phthisis, using it in cases of ulceration only, in the following formula:

℞ Iodoformii.
Acid boracic āā.....grs. j.
Morph. acetat.....gr. ⅛.

M. Ft. pulv. D. S. Ad insufflationem twice daily.

Bernard Pitts gives a case of Hæmorrhage Consequent upon Suppurative Tonsillitis, with Ligature of the Common Carotid.

Dr. Bristowe records some Clinical Remarks on So-called "Painful" Paraplegia, citing five cases of malignant disease, the symptoms of which bore upon the case in question. After his paper was placed in the printer's hands the case died, and cancer was found to be present.

Mr. G. H. Makins gives a case of Spontaneous Gangrene of Toes in a Child.

Dr. John Harley gives his Treatment of four Cases of Hydatid Tumor of the Liver.

Mr. H. H. Clutton records a case of Paralysis of the Serratus Magnus following an attack of typhoid fever. Its action was restored by the use of the induced current in galvanism, and the accompanying illustrations give a very clear idea of the condition of the parts. The literature of the subject is very interesting, and on one point the writer failed in making suitable experiments, *i. e.*, to determine the influence of this muscle on respiration. Erb declares that "the serratus is not, as was believed by Bell, Stromeyer and others, a muscle of inspiration;" but Dr. Vivian Poore refutes this by the use of the leaden cyrtometer, showing that it has a very marked action.

Dr. J. F. Payne gives Two Cases of Pemphigus. In one case arsenic did no good; in the other its use was followed by complete recovery. His paper is accompanied by an interesting table of the range of temperature.

Dr. W. H. Stone communicates an abstract of his paper On the Electrical Resistance of the Human Body, which was read before the British Association, at Southport. An obituary notice of Frank Tweed Twining follows, and the remainder of the volume is taken up by statistical and tabular reports of the obstetrical, medical, surgical and ophthalmic departments. A general index to the twelve volumes of the series is added, and accompanying the whole is the calendar and prospectus of the medical school.

THE DIAGNOSIS AND TREATMENT OF DISEASES OF THE EAR. By OREN D. POMEROY, M.D., Surgeon to the Manhattan Eye and Ear Hospital, Ophthalmic and Aural Surgeon to the N. Y. Infant Asylum, etc. New York. Bermingham & Co., 1883.

As an index of the great importance which at the present time attaches to the practice of a long neglected but now important and respected branch of surgery, we have only to inspect the recent works on the principles and practice of otology.

Not the least of the achievements of this generation of physicians has been the segregation, so to speak, of the great body of medical practice into its component parts, which has become such a distinctive feature of medical progress in our time, and one which is bearing rich fruits for the enjoyment of those who are deserving of them, for specialization in practice has opened up to the physician fields of activity which have long lain fallow.

The history of otology is replete with useful lessons to the thoughtful reader, who cannot fail to find rich profit in its perusal. Regarding its scope, we observe at once that it is coeval with that of general medicine, but that a line of marked divergence may

be traced in it, taking its origin at a period within the memory of many practicing physicians of to-day.

As is usual, however, in the fields of other arts and sciences, at rare interval there appear striking features which stand out in bold relief, and in this instance we may well be amazed at the thought that Valsalva in the 17th century devoted more than a quarter of a pretty long life (59 years) to the study of the human ear, having dissected during that time above one thousand heads, and in so doing probably accomplished more than any one man in promoting anatomical knowledge in this direction.

As regards the therapeutics of otology, we have to thank an Englishman, Sir William Wilde, for striking the very key-note of successful practice when, in his work published in 1843, he drew attention to the fact that most aural diseases are the result of inflammation, which, affecting the tissues of the ear just as it does similar tissues elsewhere in the body, is amenable to similar modes of treatment. All this looks to us simple enough in the light of modern pathology, and yet, right here lay the principles which the most learned of other times failed entirely to recognize, and accordingly, just in proportion as their ideas of causation peopled the realms of the fanciful and imaginary, their efforts at cure were unsatisfactory to their patients and to themselves.

With such thoughts as these in mind, it is a pleasure to open and read such a volume as the one before us—the fruit of conscientious labor on the part of one who has applied himself to a task for which he possessed all the necessary prerequisites to render it a success. The author has addressed his work to especially satisfy the necessities of students and young practitioners, and in so doing has made it his endeavor to be brief and perspicuous, yet we think it is to be regretted that he has not seen fit to describe even briefly the anatomy of the parts discussed, and to dwell more fully upon their pathological conditions, for such introductions are particularly desirable in text-books. The greatest difficulty which one encounters in the study of otology, is an adequate comprehension of the relations of the parts in discussion, and when this difficulty is surmounted there still remains a consideration of the pathological conditions, after which the *rationale* of treatment becomes simple enough. We think, too, that in such a work a livelier interest may often be excited by making a freer use of clinical cases, which often seem to be so much more realistic to the reader than plain generalities.

Dr. Pomeroy's work is similar in size to that of his colleague, Dr. St. John Roosa. It appears in handsome form, as has been intimated, and cannot fail to prove a valuable acquisition to the literature of the subject. J. C. H.

THE circulation of the *British Medical Journal* amounts in its weekly issue to 11,650 copies, a circulation which is about equal to the combined circulation of all the other weekly medical journals published in England.

DOMESTIC CORRESPONDENCE.

POSSIBLE CAUSES OF COMA AND CONVULSIONS.

AN ANSWER TO DR. WEST'S REQUEST FOR A DIAGNOSIS.

EDITOR JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION:

Your correspondent, Dr. G. S. West, in the JOURNAL of January 12, gives a very full and interesting history of a case of suspected "malarial coma." He expresses doubts, however, as to the existence of any such disease, stating that in thirty-two years' practice he has never heard of it until now. He also earnestly asks for a diagnosis upon the facts narrated.

It would conduce much to the advancement of practical medical knowledge, if physicians, when in doubt concerning what seems to them peculiar or anomalous cases, would oftener refer the difficulty to their favorite medical journal, frankly asking a solution from the editor or other readers, and thereby inviting discussion or even criticism upon their diagnosis and treatment. The clash of mind against mind evokes thought. Such discussions might be rendered only less interesting and profitable than those which take place at the annual meetings of our societies. They would well replace some of the elaborate papers or lectures which are met with in medical periodicals.

Others, better qualified than myself, will doubtless undertake to answer the questions propounded by Dr. West, but the following comments upon his case may be of interest to some readers:

First, as to the possible existence of "malarial coma." Unquestionably there may be a comatose condition in pernicious intermittent fever. Dr. Bartholow, in his "Practice of Medicine," second edition, p. 787, says: "In this country the most frequent varieties of pernicious intermittent are the algid, the choleraic, the pneumonic and the *comatose*." In the edition of Reynolds' System of Medicine, published by H. C. Lea, the American editor, Dr. Hartshorne, calls particular attention to the congestive form of pernicious intermittent as very common in some parts of the United States. Speaking of this, he says: "Sometimes cerebral symptoms predominate; delirium being present, passing into stupor, with stertorous respiration. Tetanic rigidity occasionally exists during the paroxysm." But, according to other authors, this form of cerebral congestion may develop without delirium."

We have no experience with such malarial conditions here at Atlantic City, where even simple intermittent is exceedingly rare; but the literature of the subject is too full and explicit to leave any room for doubt that there may be such a condition as "malarial coma."

Whether or not Dr. West's patient (T. R.) died of this affection or some other, is another matter. The onset by a distinct chill and high fever (said to be about 106), followed by rapid defervescence and profuse sweating, would give color to the hypothesis of malaria. The subsequent course, however, was irregular, there being no further notable rise of tem-

perature until the fifth day, when the first convulsion took place.

The semi-comatose state graphically described in Dr. West's report is, on the other hand, suggestive of uræmic poisoning from a latent Bright's Disease. It is unfortunate that no chemical or microscopical examination of the urine was made. If the urine had been found to contain albumen and hyaline casts, even though there was no œdema, a diagnosis of chronic interstitial nephritis, with uræmic coma and convulsions, might have been made. The drinking habits of the patient rendered such a condition very probable. A physical exploration as to the existence of cardiac hypertrophy would also have helped to clear up the diagnosis. The existence of such hypertrophy would have been confirmatory of other symptoms pointing to renal disease.

The symptoms at the outset did not correspond with those of acute Bright's Disease; therefore, upon the hypothesis of uræmia, the initial fever could only be accounted for as a complication, either malarial or otherwise, supervening upon latent chronic nephritis.

Another possible view of the case is, that there may have been cerebral syphilis or other lesion of the brain. It is stated that the man had had syphilis, and his habits were such as to predispose him to cerebral congestion. Yet simple congestion would not cause a stupor lasting, with occasional short intermissions, for five days, and passing finally into violent convulsions. And a syphilitic gumma, an effusion of blood, an abscess, or patch of softening, of sufficient extent to produce such severe symptoms, would in all probability have been attended also by localized paralysis in some part, or at least, by defective speech. Nothing is said in the report of paralysis or speech defects, and it may fairly be assumed that anything of the kind would have been observed, if existing. Hence, it may be inferred that the coma and convulsions were due to some form of toxæmia, probably either malarial or uræmic.

It is stated that after the first convulsion, when two physicians were present in consultation, 45 grains of quinine were given hypodermically, between the hours of 11 P. M. and 5 A. M. It may seem ungracious to criticise the treatment of the case, but, in the interests of medical science and of humanity, I feel it my duty to venture the opinion that such an amount of quinine *hypodermically* would be unsafe in any condition possible, and particularly so in any case of cerebral congestion.

BOARDMAN REED, M.D.

Atlantic City, N. J., Jan. 19, 1884.

HOT SPRINGS, ARK., Jan. 18, 1884.

EDITOR OF JOURNAL:—

In a recent issue of THE JOURNAL, my friend, Dr. John Thad. Johnson, of Atlanta, Ga., suggested the advisability of employing stenographers to report the proceedings and debates of the various Sections of the American Medical Association. The suggestion is a good one. These Sections usually adopt resolutions requesting the members participating in the discussions to furnish the Secretaries with copies of their remarks, but said resolutions usually amount to nothing. For instance, as acting Secretary of the Section of "Obstetrics and Diseases of Women," I only got two or three of the speeches made before that body, and there were a number of valuable ones delivered. The present Chairman of the Section made some very interesting remarks on several papers, and yet they are lost save to the memories of those who had the privilege of hearing him. I hope the members of the Association will all think carefully over this matter, and at the Washington meeting take this, another step forward.

The monied cost cannot be a great deal, and yet we will have preserved by the "art preservative" all the best discussions of the body. As it is, we have scarcely anything save the papers read and a straggling speech or two.

Let us have a stenographic report of the discussions.

Yours truly,

J. T. JELKS, M.D.

FROM WASHINGTON.

The following, of general interest to the medical profession, has been introduced into Congress:

Mr. Lowry introduced the following joint resolution in the House of Representatives January 7, 1884 (H. Res. 71):

That it shall be a misdemeanor, punishable by a fine of $500 and dismissal from office, for any officer of the United States government, civil, military or naval, to make discrimination in favor of or against any school of medical practice, or its legal diplomas, or its duly and legally graduated members, in the examination and appointment of candidates to medical service in any of the departments of the government.

That all such examinations shall be open to the attendance and witness of all physicians, citizens of the United States, and that duly certified copies of the complete records of all the details of said examinations shall be placed on file in the office of the Librarian of Congress, subject to the inspection and use of members of Congress.

Mr. Tully introduced the following bill (H. R. 1807) in the House of Representatives, January 7, 1882:

A bill to prevent the use of the United States mails to advertise noxious and dangerous medicines, foods and compounds:

That from and after six months after the passage and approval of this act, no advertisement of any kind or nature or advertising device of any medical preparation, compound or prescription, or any punch, bitters, cordial or similar compound, or preparation to be used as medicine or mixed with food, liquor, wine or any other substance used a beverage or as food or medicine, shall be placed in or carried by the mails of the United States until the exact formula for the preparation thereof, together with a sample of the same, be placed in the Patent Office of the United States, with a sworn affidavit of the correctness of such formula and the genuineness of such sample, and the examination thereof by the proper officers designated therefor in said Patent Office, and

the issue of a certificate that said substance is not noxious or dangerous to health.

Sec. 2nd makes the certificate fee $20. Sec. 3d imposes a fine of from $100 to $1,000, or the penitentiary for from six months to one year, for violation of the provisions. Sec. 4th provides for the employment of experts in the Patent Office for the purpose of making the proper examinations.

THE BUFALINI PRIZE.—The Department of the Interior has issued, through the Bureau of Education, a pamphlet of five pages on this subject, which gives all the necessary information to those who may desire to compete for it. The programme is transmitted by A. Dalla Valle, Chargé d'Affaires of Italy, under instructions from his government, through the Secretary of State, F. T. Frelinghuysen.

It is issued in consequence of a resolution adopted by the Section of Medicine and Surgery of the Royal Institute for Higher Practical Studies and Improvement, at Florence.

"Whereas, the will of the illustrious scientist, Maurizio Bufalini, dated September 12, 1874, provided that a legacy should be left to the above named Section sufficient to enable it to offer a prize to the author of the best essay on the subject named by the testator, the Section has resolved:

"(1) Competition for the Bufalini prize shall be open from this 1st day of May, 1883.

"(2) The time during which essays may be presented shall expire on the 31st day of October, 1884, at 3 o'clock P. M.

"(3) The amount of the prize shall be 5,000 lire[1].

"(4) The Chancellor of the Section of Medicine and Surgery of the Institute for Higher Practical Studies and Improvement (whose address is via degli Alfani, No. 35) is officially designated to receive the essays of competitors, and to give his receipt for the same.

"(5) The notice, the problem on which essays are to be written, a list of certain works, and the rules relative to the competition, which were laid down by Professor Bufalini in his will, shall be published. They are as follows:

"NOTICE.

"The constant experience of my long life has fully convinced me of three great truths, viz.: (1) That all principles of reasoning called a priori are entirely false, or at any rate do not lead to the discovery of other knowledge, and that the philosophy called speculative or dogmatic should therefore be regarded as impossible. (2) That only the philosophy called experimental is true, and should alone be adopted. The same is true of the method which is called by the same name. (3) That nevertheless, before my efforts in that direction, this method had not been generalized into a complete system or body or doctrine which would enable it to be more correctly understood, and which would also serve to explain complex causes and the method of reasoning about them.

"Being thus persuaded, I was compelled to conclude that the sciences had not yet acknowledged the true method, had not yet invariably followed the true mode of reasoning, and had always left the way open to well known and obnoxious ancient errors. From this it appears that the use of the experimental method has always met with serious difficulty, and this I discovered was due to the habit of reasoning with words whose meaning is not sufficiently determinate, as in learning language many words still have to be used which do not stand for sensible and concrete objects; all which has favored the birth and establishment of a mode of reasoning closely resembling the dogmatic.

"Let the learned consider, therefore, whether they can pardon me for daring to appeal to them ten years after my death, and, after that, every twenty years, to solve the following

"PROBLEM.

"The necessity of the experimental method in arriving at the truth, and the relation of all the sciences being assumed, it is required to demonstrate in a first part, how far the said method is to be used in every scientific argument, and in a second part, to what extent each of the sciences has availed itself thereof during the time that has elapsed since the last competition for a prize,[1] and how they may be brought to a more faithful and complete observance of the method itself. MAURIZIO BUFALINI.[2]

"*List of the works of Maurizio Bufalini in which the subject above referred to is more particularly considered.*

"Instituzioni di patologia analitica. 6a edizione di Firenze, 1846.

"Prolegomini. Parte I. Edizione del 1863 in Firenze, tipografia Le Monnier.

"Prolegomini. Quesiti sul metodo scientifico in appendice alle instituzioni della patologia analitica, tipografia successori Le Monnier, Firenze, 1870.

"Schiarimenti sul metodo scientifico e specialmente sull' induzione. Nel giornale Lo Sperimentale, Anno XXVI, 1874.

"Sommario delle piu essenziali ragioni del metodo scientifico. Nella Nuova Antologia, Firenze. Marzo 1874.

"Agli illustri professori della sezione di medicina e chirurgia dell' Instituti degli Studj Superiori Pratici e di Perfezionamento di Firenze ed altri.—A quelli della chimica e farmacologia insegnanti nell' arcispedale di Santa Maria Nuova—Agli medicina e chirurgia. Maurizio Bufalini, Firenze, 1874, e nello Sperimentale, Luglio, 1874, esercenti medicina e chirurgia nell' arcispedale medesimo ed altri.—Agli scholari della.

"RULES.

"(1) Each essay shall bear at the top some particular motto, and shall be inclosed in a sealed en-

[1] The lira = 19.3 cents; the value of the prize is therefore $965.

[1] The subject named by Professor Bufalini in his will is to be re-assigned every twenty years, which is why the distinguished professor refers to "the time that has elapsed since the last competition."

[2] TEMA.

Posta l'evidenza della necessità di assicurare al solo metodo sperimentale la verità e l'ordine di tutte le scienze, dimostrare in una prima parte, quanto veramente sia da usarsi in ogni scientifico argomentare il metodo suddetto, ed in una seconda parte, quanto le singolari scienze se ne siano prevalso nel tempo trascorso dall' ultimo concorso fino ad ora, e come possano esse ricondursi nella piu fedeleed intiera osservanza del metodo medesimo.—MAURIZIO BUFALINI.

velope, on the outside of which the same motto shall be written.

"(2) The essay shall be written in Italian or Latin.

"(3) The envelope containing the essay shall be accompanied by another sealed envelope bearing the same motto and containing a slip of paper on which shall be written the full name, the titles, and the place of residence of the author of the essay, which is inclosed in the other envelope.

"(4) Each of the two parts into which the subject is divided may be treated separately or both may be discussed together, at the pleasure of the writer.

"(5) The authors of dissertations relating to both parts of the subject may compete for the whole of the prize; those of dissertations which treat of a single part only, may compete for but one-half of the prize.

"(6) No essays shall be accepted that are not neatly written by a single hand, or that have corrections or additions the meaning of which is obscure. Corrections or additions or changes made by another hand will not be taken into account.

"(7) Essays not considered worthy of the prize shall be returned by the chancellor to their authors, sealed as they were by the examiners.

"(8) In case of a tie in the balloting for the award of the prize, the balloting shall not be renewed, but the prize shall be equally divided among the competitors.

"(9) The President of the Board of Examiners, before the conclusion of the session, shall publicly announce the results of the ballots taken, after which he shall announce which essay or essays have been deemed worthy of the prize; he shall then, during the same session, publicly break the seal of the envelope containg the slip on which are written the name, titles, and place of residence of the author of each of the successful essays, after which the name of the authors shall be made known to the public.

"(10) If none of the essays presented shall have been deemed worthy of the prize, the President of the Board of Examiners shall immediately so inform those present, and shall announce that another competition will at once be opened, public notice of which shall afterwards be given. It shall also be announnced that the envelopes which have not been unsealed, with their contents, are ready to be returned to their rightful owners.

"The Chancellor of the Section,
"VINCENZO PUCCIONI.

"The President of the Section of Medicine and Surgery, Prof. GIORGIO PELLIZZARI.

"Florence, May 1, 1883.

"An authenticated copy of the last will and testament of Prof. Maurizio Bufalini is deposited with the Chancellor of the Section of Medicine and Surgery, and may be seen by any one.

"N. B.—Directors of Italian scientific, literary, and political journals are respectfully asked to give the widest possible circulation to the present document."

FOREIGN CORRESPONDENCE.

LONDON, January, 1884.

There seems to be no doubt that in many serious cases of diseased lungs the new form of treatment by extreme dryness of air at a very low temperature has produced wonderful results. The neighborhood of the Engadine has now become the fashionable spot in Europe where this treatment may be best put to the test. This winter there are something like 1,200 visitors now at Davos and St. Moritz, a large proportion of whom are suffering from pulmonary complaints. A system of drainage is now in partial operation at Davos, not by any means before it was wanted, and the well-known Kulm Hotel at St. Moritz has been specially fitted for the comfort of winter guests. The favorite winter amusement of toboggining is much in vogue, and the lakes afford excellent skating. When a patient goes to Madeira, there is too seldom any question of curing his malady; the only hope is that its progress may be retarded, but a residence in the Engadine really, provided the case be at all suitable, seems to hold out strong and good hope not only for amelioration, but cure and restoration to ordinary health. The cold is intense, the thermometer sometimes falling as low as to 20 degrees below Fahrenheit's zero. But Dr. Ruedi, of Davos, the great exponent of this method of treatment, does not object to any intensity of cold for his patients, though he regards a close and stuffy room as a source of the greatest danger. The atmospherical conditions of the Engadine appear to approach closely those of the heights of Colorado and Wyoming. St. Moritz is more exposed to wind than Davos, and some of the wild wintry gales that sweep up the valley of the Inn must, one would think, be trying even to robust constitutions. Moreover, St. Moritz being on the other side of the Julier and Albula passes, is somewhat more difficult to reach from London than Davos, which is within early sledge drive from a railway station. At Wiesen a new establishment has sprung into existence, between Chur and Davos; it, however, has no lake, and therefore visitors miss the exercise of skating. Another huge inn at the head of the Maloja pass is in course of erection, but is not at present actually open for the reception of visitors.

Mr. Nelson Dobson, of Bristol, has lately strongly advocated another advance in abdominal surgery, and suggests the opening of the abdomen in cases of gastric ulcer where perforation has taken place. He advises, the stomach having been exposed and the injury discovered, it should be treated in one of the following ways: either simply to stitch the viscus to the abdominal wall and establish a fistula; or, the edges of the ulcer being pared, to unite them by sutures, or simply to sponge out the peritoneal cavity and leave all to nature. Of course, during either treatment the patient's strength would be maintained by nutrient enemata. He has not yet practically tried his proposition; what led him to seriously consider the propriety of undertaking one of the steps he recommends was a case he lately had of a young

woman who, after a laborious day, was seized with pain and tenderness in the abdomen, followed by collapse and pain in the epigastrium. Death with symptoms of peritonitis took place in less than twenty-four hours. He was at the necropsy most strongly impressed by the ease with which the hole in the stomach could have been reached.

The proposed scheme of mutual assurance for members of the profession in Great Britain is in a fair way to be successfully launched at no distant date. A provisional committee has been formed; tables have been constructed, which include not only temporary and permanent sick pay, but also other benefits such as are usual among friendly societies, amongst these a permanent annuity after a certain age. It is to be earnestly hoped that the undertaking may be a means of diminishing in the future the many cases of distress in the profession that now too unhappily occur.

The forthcoming International Health Exhibition to be held in the buildings lately vacated by the Fisheries Exhibition, promises to equal, if not excel its predecessor. The practical lessons learnt in the management of such undertakings have given rise to the adoption of some rules that will be fully appreciated by exhibitors and the public alike. The things that will be collected together appear to comprise every thing that can in any way either administer to the well-being or otherwise of the human race. The various sub-committees, under the able direction of Sir Cunliffe Owen, are now fully engaged in their arduous duties.

The Register-General has published his annual returns of the mortality rate in our largest towns. It appears that Norwich, with a rate of 12.1 per 1,000, was the best record, and the port and town of Cardiff, with one of 31.3, was the most unfortunate of the twenty-eight of the largest English towns. London had a mortality of 21.6 from all causes. The annual rate per 1,000 persons living in these towns, which had been 22.6, 21.9 and 20.6 in the last three weeks of 1883, has risen to 22.2 during the first week of this year. It has caused some amusement that, in his last report, Dr. Sedgwick Saunders has found it necessary to complain to the City Commissioners of Sewers, that among the places which had offended against the principles of smoke abatement, and thus caused a nuisance, were the General Post-Office and the Bank of England.

An interesting discussion took place at the last meeting of the Pathological Society, in connection with a case shown of a pancreas from a diabetic patient with a dilated duct, containing numerous irregular calculi of carbonate of lime, associated with fatty degeneration of the tissue of the gland. Many instances were given by members present of personal knowledge of a similar state of things being found in diabetes. Dr. Norman Moore said he had carefully examined the pancreas from a number of cases of diabetes, but the results were not constant or very definite, and he pointed out that even though the gland appeared shrunken and degenerated, microscopically the structure was often unaltered. G. O. M.

MISCELLANEOUS.

OFFICIAL LIST OF CHANGES OF STATIONS AND DUTIES OF MEDICAL OFFICERS OF THE UNITED STATES MARINE HOSPITAL SERVICE, OCTOBER 1, 1883, TO DECEMBER 31, 1883.

Bailhache, P. H., Surgeon, relieved from duty at Cape Charles Quarantine Station, Oct. 13, 1883.
Detailed as member of Board to examine candidate for promotion, Oct. 30, 1883.
Granted leave of absence for thirty days, Nov. 27, 1883.

Hutton, W. H. H., Surgeon, granted leave of absence for twenty days, Oct. 1, 1883.

Wyman, Walter, Surgeon, detailed as member of Board to examine candidate for promotion, Oct. 30, 1883.
To proceed to Norfolk, Va., to investigate the conduct of the Service at that port, Dec. 31, 1883.

Long, W. H., Surgeon, leave of absence extended ten days, Oct. 26, 1883.

Murray, R. D., Surgeon, to proceed to Ship Island Quarantine Station, Oct 17, 1883.
To inspect sites for quarantine stations, Nov. 30, 1883.
Granted leave of absence for twenty days, Dec. 18, 1883.

Smith, Henry, Surgeon, granted leave of absence for twenty-five days on account of sickness, Oct. 13, 1883.
Relieved from duty at Norfolk, Va., Oct. 17, 1883.
To report to Surgeon Sawtelle, at New York, for temporary duty, Nov. 27, 1883.
Relieved from temporary duty at New York, and placed on waiting orders, Dec. 31, 1883.

Fisher, J. C., Passed Ass't Surgeon, when relieved by Assistant Surgeon Banks, to proceed to New York for duty, Oct. 29, 1883.
Granted leave of absence for thirty days, Nov. 28, 1883.

Goldsborough, C. B, Passed Ass't Surgeon, granted leaves of absence for thirty-two days on account of sickness, Oct. 12, Oct. 20, and Nov. 1, 1883.

Irwin, Fairfax. Passed Ass't Surgeon, to proceed to Norfolk, Va, and assume charge of the Service, relieving Ass't Surgeon Glennan, Oct. 16, 1883.

Mead, F. W., Passed Ass't Surgeon, to proceed to Portland, Oregon, inspect the Service, and report the condition of Assistant Surgeon Devan, Dec. 5, 1883.
To return to station, Port Townsend, Wash. Ter., Dec. 18, 1883.

Cooke, H. P., Passed Ass't Surgeon, to proceed to Charleston, S. C., for duty, Nov. 27, 1883.

Banks, C. E., Assistant Surgeon, detailed for temporary duty at Georgetown, D. C., Oct. 11, 1883.
Granted leave of absence for thirty days, Oct. 12, 1883.

Bennett. P. H., Assistant Surgeon, placed on waiting orders, Dec. 15, 1883.
Granted leave of absence for thirty days, Dec. 22, 1883.
Upon expiration of leave of absence to proceed to Detroit, Mich, for duty, Dec. 29, 1883.

Peckham, C. T., Assistant Surgeon, to proceed to Wilmington, N. C, and assume charge of the Service, relieving Passed Ass't Surgeon Irwin, Oct. 16, 1883.

Devan, S. C, Assistant Surgeon, granted leaves of absence for ninety-five days, on account of injury and sickness resulting therefrom, Nov. 15, Dec. 5 and 22, 1883.

Bevan, A. D., Assistant Surgeon, to proceed to Portland, Oregon, and assume charge of the Service, Dec. 29, 1883.

Glennan, A. H., Assistant Surgeon, to proceed to New Orleans, La, for duty, Oct. 16, 1883.

Wasdin, Eugene, Assistant Surgeon, to proceed to Mobile, Ala., for temporary duty, Oct. 11, 1883.
To proceed to Galveston, Texas, for temporary duty, Nov. 17, 1883.

PROMOTIONS.

Benson, J. A., Passed Ass't Surgeon, promoted and appointed Passed Assistant Surgeon, by the Secretary of the Treasury, from October 1, 1883. Oct. 4, 1883.

Banks, C. E., Passed Assistant Surgeon, promoted and appointed Passed Assistant Surgeon, by the Secretary of the Treasury, from November 1, 1883. Nov. 6, 1883.

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THE AMERICAN MEDICAL ASSOCIATION

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THE

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ORIGINAL ARTICLES.

THE BACILLUS TUBERCULOSIS AND THE ÆTIOLOGY OF TUBERCULOSIS. IS CONSUMPTION CONTAGIOUS?

SECOND COMMUNICATION.

[Read before the Philadelphia County Medical Society, Nov. 14, 1883.]

BY H. F. FORMAD, B.M., M.D.,

Lecturer on Experimental Pathology and Demonstrator of Morbid Anatomy in the University of Pennsylvania; Mütter Lecturer in the College of Physicians of Philadelphia.

GENERAL CONSIDERATION.

A little over a year ago[1] I had the honor of presenting for your consideration some anatomical points in refutation of the ætiological relations of the bacillus tuberculosis.

At that time I announced some original observations regarding the histology of scrofulous tissue, tending to place the question of heredity in tuberculous disease upon an anatomical basis. These peculiarities of scrofulous tissues, I submitted as elucidating the ætiology of tuberculosis, showing that the peculiar histological condition of the individual, under the influence of simple irritants, and not the character of the irritant, is responsible for tubercular inflammation. It gives me pleasure to state that these observations have been confirmed by several competent histologists, whose articles on this subject will soon appear in print; besides which, a general interest has been manifested by favorable comments both in America and abroad.

Shortly before the publication of these observations, Koch, of Berlin, had brought forward the discovery of the now famous bacillus tuberculosis, affirming it to be the sole cause of pulmonary phthisis and other forms of tubercular disease, and claiming for it, besides exclusive pathogenetic properties, special morphological and chemical characteristics.

In my first paper, I denied some of these propositions upon grounds of personal investigation, and, subsequently, Koch's researches were also severely criticised by a number of other observers.

As interesting and valuable as the discovery of Koch is, from a biological standpoint, its practical value is, in my opinion, decidedly over-estimated, and has not nearly the significance for medical science which the enthusiastic followers of Koch ascribe to it. The influence of the discovery was, however, great in strengthening the traditional and unwarranted belief in the contagiousness of phthisis, as held by a small part of the profession and community. On the other hand, this belief led to the popularity of the discovery. In this respect the bacillus theory has perhaps been harmful, and, taking the consequences into consideration, we should not accept such a theory without the closest scrutiny.

Two practical benefits may accrue from this discovery. The first is, that the fear of the effects of the bacillus may induce greater cleanliness in hospital management, and enforce improvement in hygienic matters in general. It is doubtful whether the removal and prompt destruction of the sputum would have any influence in checking the spread of phthisis, as the disease is found as often, if not oftener, in the clean palaces of the wealthy, as in the unclean huts of the poor. The second benefit resulting from the bacillus theory may be, that physicians may become induced to make more use of the microscope in diagnosis; yet, in this respect, the general use of the microscope is hardly practicable, on account of the thorough technic and experience required.

To-day, while the bacillus is acknowledged as a common morphological concomitant of tubercle, the pathogenetic properties are denied it by the best pathologists and clinicians, on account of a want of sufficient confirmation of the evidence thus far offered.

The followers of Koch's theory are, however, numerous, but they are recruited largely from the ranks of clinical teachers, book-writers, and others possessing no opportunities for personal investigation.

It may be well to state that, upon my visit to Koch last summer, made with the purpose of doing justice to this important question, I was gratified in many respects. I found Koch an earnest and conscientious worker, and not as dogmatic and extreme in his views as would appear from his writings; nor is he as self-satisfied and as rash to jump at conclusions as are some of his followers. Koch has the coöperation of an excellent staff of assistants, all able mycologists; but it was a matter of surprise to me that there was not a single competent pathologist connected with Koch's laboratory; and such services are evidently

[1] Studies from the Pathological Laboratory of the University of Penn., xi.; "The Bacillus Tuberculosis and some Anatomical Points which suggest the Refutation of its Ætiological Relation with Tuberculosis, by H. F. Formad." Read before this Society, October 18, 1882.

much needed, to give to the observations made there the proper interpretation from a biological and anatomical standpoint. I was also pleased to learn in Berlin that the discovery of the bacillus was exaggerated, not so much by Koch himself as by the Imperial Board of Health, which employs him, and by his over-zealous followers in the profession. There is strong evidence, however, that Koch's investigations are biased by the determination to find for each specific disease a specific fungus.

Following out the various phases in the study of tuberculosis, I am sorry to see that the entire subject is now being considered from a purely ætiological basis with reference to bacteria, while the study of the anatomical and biological relations is wholly neglected.

I admire the beautiful bacteridian discoveries of Klebs, and particularly those of Koch in connection with the ætiology of tuberculosis. The accomplishment of these results is a triumph for mycology and scientific botany; but these studies are much too one-sided to have an application to scientific medicine. The bacillus is there! It is concomitant with most tubercular lesions. It is diagnostic of tuberculous change. It is, on account of its irritant properties, one of the causes of tuberculosis. But this forms no reason for asserting that tuberculosis should be considered a contagious disease, without further investigation and proof. A contagious disease can have only one cause. I cannot agree with those who define the predisposition to phthisis as being a condition of the organism which offers a favorable soil for the tubercle bacillus. Nor can I believe that inheritance is explained by subsequent infection from cohabitation; *e. g.*, that children become scrofulous by living with consumptive parents.

The latest fruits of the bacillus studies have even inspired Baumgarten (Centralblatt f. d. Med. Wis., Aug. 4, 1883) and several others to come to the conclusion, in reference to the hereditary nature of tuberculosis, that the bacillus is transmitted in its larval state from mother to fœtus in intra-uterine life! One would think, however, that one of the most wonderful effects of the tubercle bacillus is manifested by the change it produced in the direction of the reasoning of some of our pathological and clinical investigators, both at home and abroad.

Some of the younger pathologists are affected by a regular fanaticism for bacterian studies in tuberculosis. These studies now take the place of their former excellent pathologic-anatomical studies. Consideration is no longer given to the tissue changes, or the nidus which invites the bacteria and nourishes them. In fact, Koch's followers in their enthusiasm exaggerate matters, and, to Koch's own amusement, go further in their bacillus speculations than he himself thinks justifiable. It is really painful to read how some of the younger German pathologists, and a few of the prominent English surgeons, under the influence of the bacillus craze, will make, in their publications, assertions entirely unwarrantable. They describe, for instance, with the greatest ingenuity and exquisite minuteness, how "one or more bacilli" will produce certain histological changes in the lungs or in the peritonæum, designating the exact route to the same; how the different cells, the lymphatic and the blood-vessels are affected; how the bacilli convert one variety of cells into another; how they manufacture giant cells and cheesy material; how acute and chronic phthisis are produced by the bacilli, and the quantity necessary for each; how tubercles develop only and exactly in those places where the bacillus becomes lodged; how, if bacilli alone are inhaled, miliary tubercles form; and how, if the bacillus is accompanied by some other irritants, a broncho-pneumonia will ensue.

All the above statements are made by scientific medical men and pathologists, and offered as broad facts, in full earnest! I only have to say that here evidently observation is substituted by imagination and speculation; and all this is done for the sake of the convenience in explaining a disease by pretty hypotheses.

The only men who attempted to repeat Koch's experiments, besides the work done in the pathological laboratory of the University of Pennsylvania, were Spina (Studien über Tuberculose, Wien., 1883), and Watson Cheyne. Of the latter two scientists, Spina came to results entirely different from those of Koch, and they disprove beyond doubt some parts of Koch's hypothesis. From an analytical and critical point of view, Spina's studies of tuberculosis are excellent, but the technical part of his investigation is deficient, and hence not satisfactory. Watson Cheyne, to whom the "British Association for Advancement of Science by Research" had entrusted the investigation of tuberculosis, and the testing of Koch's researches, did not do justice to his mission. From Cheyne's report (*The Practitioner*, April, 1883), it is seen that he made no earnest attempt to study the nature of tuberculosis, because all he did was to study and experiment with bacteria met with in tuberculous lesions. He went to see some of the different mycologists, consulting only believers in the germ theory; obtained some French and German bacteridian material, and, after testing the same, he reports with great emphasis that Koch's bacilli are a more genuine tubercular virus than Klebs' or Toussaint's micrococci. He did not inquire, nor did he care, whether tuberculosis may have any other cause! He simply imitated some of Koch's experiments with the bacillus material in rabbits and guinea-pigs (only), and obtained, of course, the same results. Furthermore, he made some control experiments, which, as I will show, pass for nought, as they are much more deficient than those of Koch.

There are a number of excellent studies in reference to the occurrence of bacilli in the sputum and in tuberculous tissues; but the main part of Koch's hypothesis, *i, e.*, the ætiological relation of these bacilli to tubercular disease, remains still unconfirmed.

My own researches on tuberculosis were made from a standpoint different from that of Koch, and they were undertaken five years ago, being carried on continuously since that time by myself and assistants. My object was to investigate the natural history of the disease, without being influenced by any preconceived views. While due attention was paid to ex-

ternal agencies in the production of tuberculosis, the part played by the animal or human organism itself, the behavior of its component cells, and the primary changes in the tissues, were not lost sight of.

I may state that I was fortunate enough to be able to utilize the material of over four hundred cases of tubercular disease from the autopsy tables, including a number of cases studied in the pathological institutes in Europe at various times.

My present research on tuberculosis with special reference to the bacillus question, was carried on during the last year and a half, under the auspices of the Provost of the University of Pennsylvania, Dr. Wm. Pepper. This communication should not be considered a report on my investigations, as these are not yet concluded; but a detailed report of these investigations will be made next summer. Some of the positive results achieved will, however, be referred to in the present paper; otherwise it merely embodies a general critical survey of the question of the ætiology of tuberculosis, based upon a careful perusal of the literature of the subject and upon personal observation.

I may state at the outset that, while the results of my observations force me to make some concessions to Koch, namely, that his bacillus, on account of its irritative properties, can produce tuberculosis under certain conditions, I am firmer than ever in my former conclusions, from the results of repeated observations, that tuberculosis may arise from other causes. The bacillus may be one of the causes, conditionally, but it is not *the* cause. The question of predisposition stands in the way of the acceptance of the bacillus theory. Furthermore, I will try to show that tuberculosis is not a contagious disease, and it is particularly in reference to this that I am glad to bring the present subject before the Society, desiring to profit by the discussion which is to follow as a result of the experience and the clinical observation of the individual members of the Society.

The question of the contagiousness of phthisis is one of supreme importance, not only from its scientific, but also from its social aspects.

For convenience in treating the subject of the ætiology of tuberculosis, I shall speak of it under the following headings:

1. The definition, the anatomical character, and the ætiology of tubercular lesions, including pulmonary phthisis.
2. The predisposition; the predisposing conditions; scrofulosis.
3. Tuberculosis without predisposition, due to inflammation of serous membranes.
4. Question of contagiousness; clinical aspect.
5. The bacillus tuberculosis.
6. Experiments—"pro" and "contra;" traumatic tuberculosis. Conclusions.

All these considerations will have to be, of necessity, very brief.

I.—THE DEFINITION, THE ANATOMICAL CHARACTER, AND THE ÆTIOLOGY OF TUBERCULAR LESIONS, INCLUDING PULMONARY PHTHISIS.

No definite understanding concerning a disease can be arrived at unless some fixed conception of the anatomical characters and various expressions of the lesions of that disease is formed. Thus, as regards the question of tuberculosis and pulmonary phthisis, the matter would be much simpler if a general understanding could be arrived at as to the definition of tuberculosis and phthisis in its different anatomical manifestations. The pivot of the question is, what to call a tubercle or a tubercular lesion.

The traditional conception of a tubercle being a miliary node, the belief is that nothing is tuberculosis unless expressed by nodes, and that everything is tuberculosis that appears to the eye as containing nodes. These misconceptions are what bring the confusion and prevent the settlement of the question of tuberculosis, both at the post-mortem table and in the hands of the experimenter.

One of the results of this confusion is that some clinicians divide pulmonary phthisis into catarrhal, cheesy, fibroid and tubercular proper, because they do not see tubercle nodules in some of these forms of phthisis. They seem not to be aware of the fact that miliary tubercles do not belong necessarily to the picture of pulmonary phthisis; and, on the other hand, that those nodes which occasionally appear as miliary tubercles are not miliary tubercles at all; but are only miliary foci of broncho-pneumonia, due to aspiration, as will be explained later. Miliary tubercles, if at all present, usually form a part of a general disease, a tuberculosis of the whole body. In rare instances, when the miliary eruption takes its departure from the lung, the miliary nodules may be limited to the lung.

A more serious matter is the mistake that experimenters make of interpreting as tubercles the so-called inhalation tuberculosis, artificially produced in animals by means of a spray with tuberculous and other matter. The nodules produced in the lung under these circumstances are not miliary tubercles—in fact, no tubercles at all. They are simply miliary broncho-pneumonic foci, limited to those terminal collections of air-vesicles, called acini, in which some of the inhaled irritative material became lodged. The natural round boundaries of these acini correspond exactly to the usual size of miliary tubercles, and appear as such even under the microscope, although filled merely with an unorganized inflammatory exudate. The uniform distribution of these foci is due to the fact that the inhaled irritating particles are distributed only to individual and the most accessible bronchioles and acini, thus simulating a true miliary tuberculosis of the lung. Similar broncho-pneumonic foci occur in the human lung from self-aspiration of tuberculous material from a primary focus to some other portion of the lung, or throughout the whole lung. This was proven long ago, but the inhalation experimenters appear not to be aware of that fact. Careful personal observations and experiments, to be recorded in my forthcoming report, have convinced me that such inhalation experiments prove nothing, either for or against the contagiousness of tuberculosis, in connection with which they have been brought forward as the strongest affirmative proofs. Furthermore, it must also be remembered

that the so-called experimental inhalation tubercles, as a rule, remain local.

On the other hand, miliary nodes or tubercles are met with, not only in tubercular lesions, but also in a variety of similar and dissimilar lesions, such as pearl disease or bovine tuberculosis, lupus, leprosy, glanders, actinomycosis, chancre and gummata, cancer, typhoid infiltration, lymphomatous and leukæmic lesions. All these lesions, even cancer ("miliary carcinosis"), are able to give rise to exquisite miliary disseminations, or eruptions, although these are most frequently observed in tuberculosis. We already recognize leprous, lupous, glanderous, syphilitic and other tubercles, in contradistinction to tuberculous or scrofulous tubercles.

To the above nodular formations may be added a variety of minute inflammatory foci of granulation tissue, organized around minute foreign bodies introduced experimentally into various tissues; also, "false tubercles," such as mere unorganized collections of lymphoid cells, held together by some fibrine or by some artificial or natural round boundaries, such as is the case with the referred to "inhalation tubercles;" and further, also, the eruptions and follicular enlargements in the skin and mucous membranes.

The question now arises, how to distinguish between these various kinds of nodules, apart from their clinical features. They may all undergo a cheesy or a fibrous change, may calcify, and may contain giant cells. In all, bacilli may be found if a cheesy change occurs, or tends to occur, save in cancer and in leukæmic formation. Without desiring to appear skeptical, I must say, however, that it takes the skill of a Koch to differentiate sometimes the bacilli met with in the various kinds of nodes, even after applying all micro-chemical tests.

The true tuberculous tubercles occasionally do not show any bacilli whatever, as I will prove from personal observation, and from the reliable testimony of others. It will also be shown that the only test now left for determining the pathogenic peculiarity of tubercle—namely, the asserted exclusive property to produce tuberculosis—is conditional and uncertain, since substances, not tuberculous, may, under similar conditions, have the same effect.

Therefore, it is impossible to define tuberculosis, either by its anatomical peculiarity or by the pathogenic property of its nodes.

Another important point in the natural history of tuberculosis is the cheesy degeneration of its products; but here, again, we are surrounded by difficulty, if we take only the cheesy product into consideration, because all the lesions mentioned before as being characterized by, and as being capable of, nodular eruptions, have the tendency to undergo cheesy change. Besides this, simple inflammatory products have been observed to undergo a similar change, as is instanced by that form of cheesy hepatization sometimes following croupous pneumonia, and also by certain forms of rapid necrotic changes, such as occur in acute septic inflammations, designated lately by the name of coagulation necrosis. It must, however, be remembered that the total absence of cheesy masses in the body of tuberculous subjects has been observed.

To tell tuberculosis from allied lesions is only possible after a consideration of the soil in which it develops, and the location of the products, together with the clinical and anatomical manifestations.

What is the origin of tubercle nodules?

The primary occurrence of miliary tubercle nodes is, to my mind, very questionable. I have never seen it occur without the co-existence of diffuse granulation tubercle. This granulation tubercle is recognized by all as being a simple inflammatory granulation tissue, characterized by cells somewhat larger than ordinary lymphoid cells, containing usually giant cells, but undergoing very readily cheesy change on account of its deficiency in blood-vessels. This tissue is regarded by most pathologists as secondary to miliary tubercles; but I think, after careful observation, that the reverse is the case; because I have never seen upon the post-mortem table, or in animals, *primary* miliary nodes without the granulation tissue, while the granulation tubercle tissue does exist very frequently without the nodes. Moreover, primary *miliary* tuberculosis is unknown.

That tubercle is primarily a simple granulation tissue of inflammatory origin has been proven experimentally. E. Ziegler (Centralbl. f. d. Med. Wis., 1874, No. li) made the following interesting experiment: He inserted below the skin or into the peritonæum of animals, a number of pairs of glass covers, each pair glued together in such a manner that between them there existed an interspace just large enough to allow the entrance of white blood corpuscles; and these corpuscles, not being severed from the body of the animal, then formed a tissue between these plates of glass, which, upon removal after various periods, could be readily examined under the microscope, and the conditions of tissue formations traced. Under these circumstances it was observed that whenever blood-vessels had developed in the new-formed tissue between the glass plates, an organization of the cells into a perfect connective tissue took place; but, when the formation of blood-vessels had failed to occur, then a tissue simulating tubercle tissue was formed, made up of epitheloid and giant cells, and cheesy changes had occurred. Ziegler very properly declared the latter product to be tubercle tissue. I have had, and have at present, ample opportunity to corroborate the accuracy of these observations. Ziegler's experiments were repeated in the pathological laboratory of the University of Pennsylvania by Hammer, and at present are being carried on by Woodnut. By these experiments, made with but slight modification, after the method of Ziegler, under varying conditions and upon various animals, it was shown that the granulation tissue gradually gave origin to tubercle nodules. Furthermore, these experiments showed that the tubercle nodes and cheesy changes ensue without the action of bacilli, as the latter were found not to be present when proper care was taken, during the execution of the experiment, to exclude them.

From the examination of tubercular tissue from various sources, I may say that I have seldom suc-

ceeded in finding tubercle bacilli in newly-formed tubercular tissue made up of small lymphoid cells. In older tubercular tissue, made up of opaque epitheloid cells and giant cells with a nodular arrangement, particularly when this tissue is undergoing necrotic change, bacilli are quite common, except in some forms of tubercles of serous membranes, to be referred to later. Tubercle tissue that has undergone a complete cheesy change, contains the greatest number of bacilli. Cheesy matter of any source is a dead substance, and it is usually inhabited by bacilli, if these get access to it; while other bacteria are scarce on this nidus.

Examination of materials from the autopsy table shows that tubercle expresses itself in various manners. Primarily, tubercle occurs as a mere infiltration of lymphoid cells in the adventitia of blood-vessels, or as small nodular masses of lymphoid infiltration around blood vessels or ducts of any kind; or tubercle tissue may organize within blood-vessels and various ducts. Sometimes tubercle appears as a diffuse lymphoid infiltration, extending over a larger area, showing a greater or less tendency to the formation of nodes and cheesy or fibroid change, as in the lungs. Tubercle tissue may form masses of the size of a hen's egg, particularly in the brain and serous membranes. In the lungs, in racemose glands, and in mucous membranes, catarrhal changes always follow the tubercle infiltration. On serous surfaces primary tubercles appear often as flat or nodulated patches of various sizes (in peritonæum), or as fungoid vegetations (in synovial cavities), or even as large plastic masses (in omentum). In the skin and mucous membranes, tubercles produce eruptions, ulcers, or nodular indurations; in bones—caries, with abscess formation in surrounding parts (cold abscesses). Fibroid capsules, made up of connective tissue, due to reactive inflammation, enclose often smaller or larger tubercular masses, especially if these have undergone cheesy change.

Primary tubercle manifests itself quite variously in different animals. In guinea-pigs and rabbits, it appears mainly as small cellular infiltrates; in dogs, it often undergoes a fibroid change; in goats, and especially in cattle, tubercle often forms large nodular, sometimes pedunculated masses which often calcify;[1] in birds, it forms, preferably in the liver, large round mulberry masses, which, on section, appear sometimes as horny, radiating structures.

Secondary tubercle presents an aspect entirely different from primary tubercle, and it manifests itself in nearly all instances in but one form, namely, as a fine miliary eruption representing those well-known gray semi-transparent nodules of the size of a millet seed, called miliary tubercles. These seem to lie in the perivascular lymph-spaces, and are probably distributed throughout the body mainly by means of these lymph-channels of the blood-vessel walls. Tubercles do not occur in avascular tissues. There is, however, a second form of embolic or metastatic tuberculosis, which evidently distributes itself by the blood-current proper, and it appears in the form of conical masses or round nodes, which may reach the size of a walnut, and are located usually at the bifurcation of arteries. No mention of this form of tubercle is made in text-books, although upon the post-mortem table this variety of tubercle is a very common occurrence. Especially is it seen in the lung, and more rarely in the spleen and liver.

Taking into consideration the enormous frequency of local tubercular lesions (counting pulmonary phthisis into this category), the occurrence of secondary or true miliary tuberculosis must be considered a rare affection. A tuberculosis affecting the lining of even the whole peritoneal cavity, including its lymphatic glands, or that of the pleural sacs, or that involving one or both lungs, must, when occurring thus in but one locality, be considered a local tuberculosis. In such instances, the tubercle spreads by continuity of structure.

It is a fact, established by Virchow, that tuberculosis is at first a local disease, and only become generalized secondarily. This generalization does not affect the blood like in infectious diseases, but it takes place simply as an embolic process, like in some tumors. Local tuberculosis in external organs and accessible lymph-glands is often a harmless affection. It is strongly related to primary tumors. Complete early removal of local tubercular lesions is practiced successfully in Europe. Volkmann and others have removed, for instance, lymphatic glands, testes, and joints affected with fungoid synovitis, with the object of preventing secondary tuberculosis, and have thus prevented a general miliary tuberculosis.

Nor should a gloomy prognosis be given in early phthisis. It is astonishing what a large number of healed cavities and cicatrices in the apices of lungs are found on the post-mortem table, indicating the healing of phthisis in persons who long subsequently died from some other causes in later life.

We have seen that tuberculosis manifests itself quite differently as to structure, appearance, distribution and termination in the various animals, and even differently in the various organs of one individual. Our studies have shown that these variations in the expression of tuberculosis depend upon the structural peculiarities of the various kinds of animals, and sometimes even upon the difference of the structure in animals of the same species. We have also seen that even in human beings tubercle tissue may manifest itself in various forms. In some individuals it develops rapidly, and spreads over large areas, becoming generalized and undergoing speedy cheesy change; in other individuals it develops slowly, fibroid change predominating; and in others the tuberculous product may calcify. In most individuals tubercular lesions may remain entirely local.

It is well known from clinical experience that the general condition of the organism has very much to do with the healing of a local tuberculosis. A local tuberculous inflammation may heal or become arrested in its progress, if the patient "gets strong," or it becomes more developed and aggravated if his

[1] I have met with, on the autopsy table of the Philadelphia Hospital, two cases of tuberculosis in man that were identical in every respect to bovine tuberculosis. Dr. Creighton, of Cambridge, England, describes a number of cases from his own observation, and collected from literature. Bovine Tuberculosis, London, 1881.

general health "runs down." Observation has further shown that any simple non-specific wound in a weak, ill-nourished individual may fail to heal, becoming unamenable to treatment, and probably assuming a tubercular character.

In some animals spontaneous tuberculosis is unknown, and while some animals are easily tuberculizable experimentally, in others tuberculosis can not be produced.

It is in accordance with experience that in a large number of families the predisposition to tuberculosis is hereditary, and that their members die promptly of phthisis at a certain age from the effects of a simple "cold," while in the history of other families this affection is unknown. Every individual is liable to acquire syphilis, small-pox, and other contagious diseases, but it is proven that not every one can have tuberculosis. A special predisposition and a special individual are required. In such an individual, a simple inflammation resulting from any cause whatever, can produce tuberculosis.

Therefore, for the development of tuberculosis, two conditions are necessary:

1. A *definite* soil.
2. An *indefinite* irritant.

The reaction of the soil is always the same under the influence of any irritant, whether that irritant be a bacillus or not; since the result (tuberculosis) following a lesion in such a soil depends upon the character of the soil, and not upon the character of the irritant, even though one irritant, say bacilli, may act more readily than other irritants.

In view of the demonstrated fact that simple injuries of any kind can excite a tuberculosis, but only in certain individuals and tissues, it is evident that tuberculization is determined by the kind of soil and, not by a specific irritant. *Tubercle should, therefore, be defined as being an inflammatory new formation in a special individual or tissue.*

What is the place for tubercle in pathology? The anatomical criterion for tubercle is a granulation tissue made up of lymphoid or epithelioid cells, which, on account of deficiencies in the soil, does not undergo any higher organization, nor tend to heal; but tends to form nodes and undergo cheesy change. Under favorable circumstances it may heal through fibroid change. The elements of tubercle tissue may spread by continuity of structure to surrounding parts, and occasionally tend to the production of metastasis, distributing themselves by means of the lymphatic system principally, and rarely by blood-vessels; and may generalize themselves through the whole body, forming miliary nodes or tubercles.

This miliary eruption of tubercle appears to have the same relation to the primary tubercular growth as the secondary metastatic cancer eruption has to the primary cancerous growth. Like in cancer, the elements of tuberculosis may be arrested temporarily by the lymphatic glands governing the affected region.

In tuberculosis, lymphoid cells form the nodes; in cancer, epithelial cells. While secondary cancer nodes are, as a rule, much larger than tubercle nodules on account of the well-known great proliferating power of epithelium, it is also a fact that cancer may appear as a miliary carcinosis, expressed by minute nodules, not distinguishable macroscopically from miliary tuberculosis. Cancer is proven to be a local disease. It is not contagious. It is infectious only to the individual who is affected by it; *i. e.*, it is self-infectious. And so is tubercle, in every respect, a local, self-infectious disease.[1]

That local manifestation of tuberculosis in the lung, which is designated by the traditional name of pulmonary phthisis, forms perhaps nine-tenths of all tubercular lesions, and hence deserves some special consideration.

I arrange myself with those who regard all forms of pulmonary phthisis as tubercular. There are only three or four lesions of chronic wasting disease of the lung which may be excluded from phthisis. These are atelectasis, or collapse from pressure of effusions; bronchiectasis, in which the enormous dilatation of the bronchi may lead to large cavities and atrophy of lung structure; primary fibroid changes; and abscess of lung. Yet all these lesions may become tuberculous from secondary inflammatory changes which usually follow.

The lesions that are known as catarrhal pneumonia, bronchio-pneumonia, pneumonic phthisis, cheesy pneumonia, tubercular phthisis, and fibroid phthisis, are all manifestations of the one disease. Such a classification may be, however, entirely justifiable and useful for practical clinical and therapeutic purposes. Pathologically considered, phthisis is a local tuberculous inflammation of the lung, which may manifest itself in various ways, the appearance depending upon the duration of the disease, the mode of onset, and the constitution and condition of the patient. Lesions representing the different forms of phthisis, and their transition from one form to the other, are often seen in the same lung.

Virchow insists that nothing should be considered tubercular unless it shows true tubercle nodules, and hence he does not recognize cheesy pneumonia—or cheesy hepatization, as he calls it—as tubercular, although he does not object to the term phthisis for this lesion.

I was fortunate enough to attend several times the demonstrations on this point of Virchow, the father of the view of the dual origin of cheesy matter and phthisis; yet from our present knowledge of what constitutes tubercle, I cannot help interpreting all the forms of phthisis as of a unitarian origin. It is, after all, as Virchow himself says, only a matter of nomenclature. If we consider the presence of bacilli of Koch as the differentiating point between what is tubercular and what is not, we find that catarrhal and cheesy pneumonias are the most tubercular of all, because they contain, as a rule, more bacilli than any other forms of phthisis.

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[1] Cancer and tubercle are considered analagous lesions, and classed with tumors, by a number of pathologists. This fact would not make it inconsistent to call tubercle an inflammatory product, as the distinction between inflammatory processes and tumor formation is a purely arbitrary one. Virchow pointed out that the majority of tumors are purely inflammatory products (a statement antedated twenty years by Professor S. D. Gross). A few years ago I made the question of the ætiology of tumors a subject of careful personal study, which I yet continue, and I am forced to the conclusion that *all* true tumors are inflammatory products, and that no line of distinction can be drawn where the process which we call inflammation ends and where tumor formation begins.

Although cheesy pneumonia, like all forms of phthisis, remains commonly a local affection, it is seen on the autopsy table to give rise to miliary tuberculosis at least as often as any of the other forms of local tuberculosis.

We are then at present at the same standpoint in regard to the character of tubercle and cheesy matter as Lænnec (1819); and it is, indeed, perfectly reasonable to suppose that any cheesy matter found in a scrofulous person or animal is tubercular. Of course, it is evident that tuberculosis of the lung is usually accompanied by simple inflammatory products, such as organized connective tissue (chronic phthisis), or unorganized croupous and catarrhal exudates (predominating in acute phthisis), which may undergo rapid necrotic and purulent changes, resembling cheesy material. For the latter products the name "coagulation necrosis," as applied by the Heidelberg and Leipsic people, may be employed. Tubercle bacilli are commonly found in this coagulation necrosis. True tubercular cheesy matter should, I think, be considered only that product which is derived from the breaking down of previously well organized tubercle tissue.

I need not refer to the details of the manifestation of tubercle in the lung, as these are too well known. But I would like to remark here that those small whitish or gray nodules, usually of somewhat irregular shape, which are seen more or less densely scattered throughout the parenchyma of lungs affected by phthisis, are not miliary tubercles, but minute foci of broncho-pneumonia.[1]

These minute bronchо-pneumonic foci take their origin from tuberculous matter disseminated by means of air-passages, as explained before. *Miliary* tuberculosis of the lung distributes itself by means of the perivascular lymphatics, is very rarely accompanied by catarrhal changes or hepatization, and rarely arises from a primary tuberculous focus of the lung itself; it is, as a rule, a part of general tubercular disease.

II.—THE PREDISPOSITION.

Having shown that for the production of tuberculosis we need a special soil, and that the irritant is only of secondary significance, some inquiry into the nature of this soil is necessary.

The question of the predisposition to tuberculosis, as it stands at present, must be considered from three aspects:

1. The clinical aspect.
2. The anatomical aspect.
3. The bacteridian or parasitic aspect.

The consideration of the clinical aspect of the predisposition to tuberculosis is invaluable, as it rests mainly on actual observation, on demonstrated clinical facts, and on conclusions drawn from statistics.

From time immemorial, a clinically well-defined condition of the system, known as the strumous diathesis in its various forms, has been recognized. This condition will be considered later on.

There are a number of ailments which, from the experience of clinicians, are known to have a great, direct or indirect, influence in the development of general tuberculosis and pulmonary phthisis; or are known to create conditions of the system that predispose it to this malady. Such are syphilis, inflammation of serous membranes, bronchitis, croupous pneumonia, diabetes, the exanthemata, especially measles and typhoid fever, deformities of the skeleton, rickets, cerebral and spinal diseases of various kinds, dyspepsia, the puerperal state, uterine diseases, prolonged nursing of children, onanism, change of climate, continuous loss of sleep, distress, etc.

That exhaustion, exposure, the deprivation of food, and other hardships of campaign life, etc., are prominent ætiological factors in the production of pulmonary consumption is learned from the accounts of military surgeons, who observed among young, robust soldiers a remarkable increase in the morbility and the mortality of phthisis, during and immediately after the close of a war. Such observations have been made in the Franco-Prussian and Turko-Russian campaigns. The fact that consumptive soldiers are not allowed to enter upon a campaign (certainly not in Germany and Russia) excludes here the probability of contagion.

Statistics also show the remarkable prevalence of phthisis in persons of certain occupations, such as stone-cutters, miners, cigar-makers, weavers, telegraph operators, book-keepers, and persons engaged in certain other occupations of a more or less sedentary nature. It is more natural to suppose that the disease or predisposition to it is created by the character and the conditions of the occupation, than that a contagion should affect preferably shoemakers, miners, or soldiers in the battlefield. Again, in most phthisical patients the beginning of the disease can plainly be attributed to an exposure, to a "cold."

On the other hand, there are pathological conditions or diseases which appear to prevent the development of phthisis and tuberculosis in general. It is an established clinical fact that phthisis is extremely rarely, if ever, associated with mitral heart disease; and, from my own observations, I believe that phthisis is rarely coincident with tumors. For the latter circumstance I can offer no explanation; nor is there any statement to this effect in literature. Rindfleisch has suggested that heart disease prevents the development of phthisis by inducing repeated slow congestions of the lungs, these congestions producing an overgrowth of the muscular tissue of the bronchioles and air-vesicles, which thus gains strength for repelling the exudates following inflammation.

If tuberculosis were depending upon a contagium for its development, neither heart nor tumor disease, nor any condition of the organism, could ever prevent its occurrence.

All the clinical facts above referred to prove definitely the necessity for a predisposition for the development of tubercular disease, and militate against the necessity of a contagium.

The anatomical aspect of the question—the morphology of the soil in which tubercle develops—is the most important aspect.

[1] See, in connection with this, the excellent studies of Wm. H. Mercur, from the pathological laboratory of the University of Pennsylvania, published only in abstract form in the *Phila. Med. Times*, July, 1883.

Beneke[1] tries to explain the disposition to tuberculosis by a disproportion between the size of the heart and blood-vessels and other organs to the bulk of the body.

Schottelius[2] made recently some interesting observations concerning the mode of termination of the smallest bronchioles and their relation to the lung acini in different animals. He found that in the carnivora the entrance of the bronchioles into the acini presented very small apertures, so that the air-vesicles were not easily accessible to irritants; while in the herbivora the terminal bronchial terminations were quite wide, thus permitting the free entrance of irritants. He states that in man the bronchial terminations congenitally approach sometimes those of the carnivora, and sometimes those of the herbivora. In the latter type, he believes to have found an anatomical explanation for the predisposition in some individuals to pulmonary tuberculosis.[3] Weigert, of Leipsic, (one of the most enthusiastic germ-theorists), properly remarks upon the observation of Schottelius, that it does not explain the predisposition, as the same animals will re-act, upon the introduction of the "poison of tuberculosis" into any other part of the body where the bronchioles do not come into play.

My own studies upon the minute anatomy of the tissues of man and of animals predisposed to tuberculosis, extended over a large amount of material, and gave results which, to my mind, satisfactorily explained this condition. These results I announced at a meeting of this Society in October, 1882.

The anatomical peculiarity observed in either man or animals, be it inherited or acquired, I first showed to be, briefly stated, as follows: All the tissues of the body approach somewhat an embryonal type; they are peculiarly rich in nuclei and young cells, and the lymph-spaces of the connective tissues are narrower, fewer in number, and show a great many more cellular elements in the scrofulous than in the non-scrofulous. So far, subsequent observations of others agree with mine. Objections are raised only as to the direct relation between these structural peculiarities and tuberculosis. Here I must state that I only suggested, and never asserted, the necessity of such a relation. It is quite possible that there are some other and more striking peculiarities in the morphology of scrofulous animals yet undiscovered. This much I can, however, reassert today: that tuberculosis usually ensues when a simple inflammation is set up by any kind of injury, in animals with the structural peculiarity which I have described; but tuberculosis cannot be produced in animals that do not have this structural peculiarity, so far as my experiments show, unless the injury is inflicted upon serous membranes.

For the details of my researches in this direction, I must refer to my first paper upon this subject.[4]

Koch asserts that the structural peculiarities of the tissues which I described can have no ætiological relation to tuberculosis, because an animal not possessed of such tissue peculiarity—the cat—is easily inoculable by tuberculous material. Here I must differ from Koch, as in my experience with cats this is not the case; and, again, Koch brings no proof for his assertion, and I am unaware that he, or anybody else, produced tuberculosis in a cat, except by inoculation into some serous cavity. That inoculations into serous membranes prove nothing for tuberculosis, as I have shown conclusively, Koch still seems to fail to see. But here is a way in which cats may become tuberculous, with or without the bacillus. In one instance we kept one of the cats in a close box, *deprived* of liberty, good air, the comforts of life, motion, and sufficient food; she also had been inoculated with diphtheritic material eight months previously, but had recovered. After the lapse of a year the cat was set free, but was accidentally killed, and was found to be affected by general tuberculosis in a high degree.

This, in my opinion, corresponds fully to the conditions in which a healthy young woman is placed, and finally becomes scrofulous, and then tuberculous, from a simple cold, after being the faithful nurse for a couple of years of a consumptive husband.

On the other hand, there is full reason to believe, as it is in accordance with experience, that young scrofulous persons, under proper conditions, may become normal individuals; *i. e.*, lose or outgrow the predisposition to tuberculosis. (I have dwelled upon this in my first communication on this subject.)

The scrofulous habit, and consequently also phthisis, may skip a generation, and does not invariably embrace all members of a family. It has been observed that parents may have at first healthy children without any vice, who grow old well; and subsequently the same parents, without being phthisical (but perhaps otherwise becoming deficient in health), may have other children that exhibit a full scrofulous habit. But even the reverse has been observed.

It would be highly desirable if physiologists would furnish some experimental observations on the circulation of the plasma in the lymph-spaces. This is, to my mind, a circulation or movement of the vital juices in the tissues, which, for the well-to-do of the individual, is of importance next to that of the blood. These important channels, the lymph-spaces, are known to regulate the blood-pressure, carry and breed (white blood corpuscles) food for the tissues, lubricate tissues and relieve the body, if any of its parts are damaged by injury of any character, of inflammatory exudates, dropsy, etc. These channels are nearly blocked up, nearly useless in the *scrofulous*, and hence cannot perform their functions; and thus modify materially the condition and the fate of the individual, in case of disease.

The term "*scrofulous*," which I retained for describing the above-stated anatomical peculiarity of animals and individuals, is as good as any other term; moreover it is known by all as designating the "predisposition" to tuberculosis. Scrofulosis should be called a *condition* and not a disease, as it has its

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[1] Die erste Ueberwinterung in Nordeney, Norden, 1882.

[2] Virchow's Archive, vol. xci, 1883.

[3] The method of investigating this condition is not without interest. The vesicular structure of the lung was injected, through the bronchi, with a resinous melted mass, which, on cooling, presented molds of the bronchioles, in connection with their characteristic infundibula and acini.

[4] *Loc. cit.*

(a natural) hereditary and widely distributed type in man, and its homologue in some normal animals (rabbit, guinea-pig, etc.). It must be remembered that the scrofulous individual acquires certain lesions, such as enlargements of lymphatic glands, cold abscesses, caries, long-standing catarrhs of various kinds, skin eruption, and certain deformities of bones, only under the influence of injuries, or of the same agencies which, in the non-scrofulous individual, lead to transient and curable affections.

Virchow designates simple, permanent enlargement (hyperplasia) of lymphatic glands, with or without cheesy change, "scrofulous," in contradistinction to "tuberculous" lymphatic glands, which contain miliary tubercle nodes (heteroplasia), and which also undergo cheesy change.

There is nothing called "scrofulous" or "scrofulosis," which by others is not also called "tubercle" or "tuberculosis." There are, strictly speaking, no scrofulous products, but only tuberculous products. The traditional term "scrofulosis" is variously used and interpreted, although it is not evident that any one means by it anything anatomically well defined.

Others take matters easier, calling everything *tuberculous* that contains tubercle bacilli, and calling scrofulous all cheesy matters in which bacilli are absent.

There is still a third aspect of this question, viz.: the parasitic or bacillary theory of the predisposition to tuberculosis. As I mentioned in the early part of this paper, Baumgarten, Mordiant and several others recently brought forward that not only tuberculosis but even the predisposition to tuberculosis is to be explained by the suceptibility of an individual to bacilli! Under this hypothesis, the inherited scrofulous tendency in individuals is created through the mediation of the bacilli. It is supposed that the bacilli or their spores may be conveyed to the ovum by the organism of the mother, or in utero by the spermatozoids of the father. Furthermore, they say, inheritance is to be explained in no other way than by a bacillary infection of the infant through the milk of the nursing mother, and by subsequent living together of children and phthisical parents. We may exclude such view altogether from consideration, as it has not been proven. Besides, it is not in accordance with facts from observation. It is as contrary to biological laws to accuse parasites for the transmission of a predisposition to tuberculosis, as it would be for that of epilepsy, etc. Hence we may dispose of such view as an unfounded, absurd hypothesis.

I am not opposed to the germ theory of disease, where it has its well-founded and proper application. Bacteridian studies have contributed largely to our knowledge of a certain class of pathological processes and lesions. But misinterpretations of the significance of bacteria; bacillary speculations, without occasion for them and without any proper application to the subject, are a check to the progress of medical science. The question of the predisposition to, and the cause of, tuberculosis, demands a great deal more of solid pathologico-anatomical and experimental studies; it can by no means be regarded as settled, and least of all through the discovery of a bacillus inhabiting necrotic tubercular tissues.

III.—TUBERCULOSIS, WITHOUT PREDISPOSITIONS, DUE TO INFLAMMATION OF SEROUS MEMBRANES.

For some years I felt much interested in the question whether or not simple inflammation of serous membranes could lead to tuberculosis in the non-scrofulous, that is, in persons who have no family history of tubercular disease; and I would like to ask the opinion and experience of the members of the Society upon this question. It is well known that there may be primary tuberculosis of serous membranes, producing secondary inflammations; and, on the other hand, tuberculosis secondary to adhesive pleurisy or peritonitis is also common in serous membranes. The general belief, however, is that whenever tubercular disease in either case occurs, if not secondary to phthisis or tubercular disease elsewhere, a strumous or scrofulous condition is required.

Traumatic injuries of joints are known to lead often to fungoid (tubercular) synovitis and general tuberculosis, occasionally in individuals with good family history. Simple injuries of the eye-ball (the anterior chamber as well as joints is lined by serous membranes), under conditions as above stated, have also been known to lead to tuberculosis, as recorded by Wolfe (*British Med. Journal*, March, 1882); Gradenigo (*Annale d' Oculistique*, 1870).

Dr. M. Litten,[1] of Berlin, was the first to publish some accounts which demonstrate that miliary tuberculosis may be caused directly and primarily by pleurisy and inflammation of other serous membranes in persons with no phthisical history, and without any cheesy masses being formed in any part of the body. In his (Litten's) experience this was particularly the case when there was a rapid reabsorption of the exudates in case of chronic pleurisy, or if repeated removal of the fluid of a hydrothorax or ascites by tapping has been performed. He records several well studied cases of that kind, accompanied by autopsy records. Litten's observations at no time, however, received their well deserved attention.

Not only clinically, but also pathologically, this part of the tuberculosis question is rather neglected. In text-books of pathology the occurrence of primary tubercle in adhesive bands is incidentally mentioned, but no special consideration is devoted to its ætiology and manifestations.

Upon the autopsy table I have repeatedly met with subjects with exquisite primary tubercular peritonitis, pleurisy, or pericarditis, which, upon inquiry into the history of the cases, failed to reveal any phthisical or scrofulous history. The products of these inflammations were often plastic in character, not unlike those of fungoid synovitis. The appearances sometimes present themselves particularly strikingly in the peritonæum; all the viscera may be glued together by plastic material into a solid mass. The omentum

[1] M. Litten, Sammlung Klin. Vortrage, No. 119. Ueber acute Miliartuberose, 1877. For further references see Wiener Med. Presse, No. 36, 1882; Charite Annalen, vol. vii, Berlin; Krankheiten der Respirations-Organe, in Virchow's Handb. der Spec. Path. und Ther., vol. i; Virchow, Geschwulste, vol. ii, p. 725, etc.; also, Formad, Transactions of the Phila. County Med Society, and of the Pathological Society, for 1882-83.

is usually retracted and matted together in a solid cord or mass, which, laying parallel with the transverse colon, reaches across the abdominal cavity, and may have a thickness of from two to four inches; the mesenteric and other lymphatic glands are usually normal, but sometimes in advanced cases may be much enlarged and more or less cheesy. The perfect absence of any cheesy focus in the body is, however, often a conspicuous feature in these cases.

Some pathologists deny the tubercular nature of these formations, and of the flat, nodular masses which cover the serous surfaces in these cases. It is true that fibroid changes predominate in these formations; but numerous tubercle nodules, with all the necessary attributes, epithelioid and giant cells, and necrotic changes, were plainly seen in all cases which I had occasion to examine. Secondary miliary tubercles of quite recent date are also found thickly strewed locally in these parts, and may or may not be seen in the lungs and other organs. As a rule, there are more or less ascites in these cases. My colleague, Dr. E. O. Shakespeare, has recorded similar cases, and Dr. Morris Longstreth tells me, also, that he had seen and studied such cases. Dr. Mitchell Prudden describes (New York *Med. Record*, June 16, 1883) an allied case.

In chronic adhesive pleurisy there occur similar primary tubercular formations in the organized plastic exudate, which in some cases gives rise to secondary (miliary) tuberculosis of other organs. The lungs may be perfectly normal in all parts, and show only peripherally, just below or bordering the pleura, some indurations of gray color made up of recent tubercle tissue. These young tubercle infiltrations are in some cases seen to have penetrated into the substance of the lung, like in a pleuro- or dissecting-pneumonia, directly from the old tubercular masses of the adjacent pleural membrane.

I have also examined several cases of plastic adhesive pericarditis, and found the plastic vegetations in this lesion to contain tubercles; two of these had coincident pleuritic lesions.

Cases which came under my observation during the last eighteen months—*i. e.*, since the opening of the bacillary campaign—were, of course, carefully examined for bacilli, and the results may be summarized as follows: Bacilli were found in most of the lesions, if the tubercular disease of serous membranes was accompanied by cavities and cheesy masses in the lung, or by tubercular ulceration of the intestines, and if cheesy changes in general were prominent; but no bacilli could be discovered, even after repeated and careful search, in any of the lesions of four cases of primary peritoneal and pleuritic tuberculosis examined. In none of these latter four cases were there any conspicuous cheesy changes in any organ, and no cavities or marked hepatizations in the lung, and no intestinal ulcers, although in two there was slight pulmonary miliary tuberculosis. These cases will be recorded in detail in a future publication.

I have also seen several cases of primary tubercular pleurisy and pericarditis, and a few of primary tubercular peritonitis, in the pathological institutes of Virchow in Berlin, and of von Recklinghausen in Strassburg. I questioned these foremost men of pathology concerning the ætiology of these lesions. They, as well as Rindfleisch, of Würzburg, told me personally their opinion, stating their firm belief that these lesions often directly originated from simple chronic inflammatory changes, without the agency of any cheesy focus, or any specific agencies whatsoever.

Birch-Hirschfeld also states, in his classical pathological work (page 183), that "nearly every exudative pericarditis and pleurisy leads to a local tuberculosis, if it takes a chronic course."

How often primary tubercular lesions of serous membranes occur in non-scrofulous persons, and whether this is the only form of tuberculosis in this class of persons, is, of course, a matter of speculation, until thorough statistics and careful studies are made in this direction. Nevertheless, it is a demonstrated fact, as I will show further on, that primary tuberculosis can be produced in the peritonæum of animals, like the dog, which are proved not to have any scrofulous tendency. I have seen this myself, and seen O. C. Robinson in my laboratory succeed in this experiment, by the introduction of simple irritants into the peritoneal cavity. Koch also never succeeded, even with the bacillus, in producing tuberculosis in the dog, except when using the peritoneal cavity or the anterior chamber of the eye (which is also a serous sac) as a point for inoculation.

Here is room for hypothesis. I would prefer to believe that tuberculosis could occur only in scrofulous persons, as this would better agree with the *scrofulous anatomy*. It is, however, possible that a scrofulous anatomy of the tissues may be artificially established by the blocking up of the lymph-spaces of the serous membranes, by fibrine and molecular *débris*, suspended in the serum which is being reabsorbed. This would then be a mechanical process, and not one of infection. If an inflammation occur in serous membranes, resolution becomes difficult through the peculiarity of the exudate. This is fibrinous mainly, and forming extensive, usually permanent organized deposits, it impairs the function of serous surfaces quite materially; the reabsorption of new exudates is probably, sometimes, entirely impossible. Thus conditions may possibly be created in serous membranes, not unlike those of scrofulous tissues, and simple irritants, perhaps the fibrine, may induce in them a similar reaction.

IV.—QUESTION OF CONTAGIOUSNESS. CLINICAL ASPECTS.

The idea of the contagiousness of tuberculosis is not new, and like other unfounded views in medicine, it has oscillated, like all fashions will, from one extreme to another for many generations. At present it is entertained by a number of scientists and by a part of the profession. This view has called forth from time to time, a number of researches whose results were either pro or contra. I will refer to these subsequently.

Of late, it appears that the belief in the contagiousness of tuberculosis has won considerable ground, not so much on account of accurate observation, as on account of Koch's discovery of the bacillus tuberculosis.

Another element which seems to have had an influence in this direction, is the fact that certain experimenters, formerly believing, from their own experiments, that tuberculosis was non-contagious, were led. later on, to change their opinions on account of the results of subsequent experiments. These latter experiments will, however, be shown not to be conclusive.

Before discussing the merits of the bacillus question, I would like first to consider the question of contagiousness from clinical grounds; and should it be proven that tuberculosis is not contagious, then the necessity for a contagium surely falls to the ground.

According to the observations of the most prominent clinicians who have paid special attention to this matter, there is not a single authenticated case of tuberculosis as a result of contagium on record. Among scores of experienced men who deny thus the contagiousness of tuberculosis it is sufficient to mention the names of Virchow, V. Recklinghausen, Stricker, in Germany; Gull, Williams, Watson, Paget, Humphrey, Richardson, in England; Bennet, in France; and Hiram Corson and Traillgreen in our own midst—all men of close observation, with ripe experiences reaching over thirty to fifty years.

The statistics of the large Brompton Hospital for consumptives, for thirty-six years, with regard to the resident officials, compiled by Dr. F. Williams (quoted after the *Lancet*, 1883), shows that of four resident medical officers, one of whom had served twenty-five years, none had any lung disease; of six matrons, none were consumptive; of 150 resident clinical assistants, eight became consumptive and five died, but in only one was the disease developed during residence at the hospital. Since 1867, of 101 nurses, only one died from phthisis, and that after leaving the hospital. Before 1867, six died, three of these of phthisis, but only one became so whilst resident, and she had a consumptive sister. She died thirteen years after first joining the hospital, but was not there the whole time. Of thirty-two gallery maids since 1867, none developed phthisis whilst at the hospital. Of twenty house porters, five died, but none of consumption. Non-residents: Of nine secretaries, three were threatened with lung disease, but recovered. Of twenty-two dispensers, seven died, three of phthisis, one while at the hospital. Of four chaplains, three died, none of phthisis. Of twenty-nine physicians and assistant physicians, eight died, none of phthisis. At the Chest Hospital, Victoria Park, there have been five resident medical officers during about the last fifteen years; all are alive and well. Two matrons, neither consumptive. There were two clinical assistants appointed every three months; none known to have developed the disease at the hospital. One nurse out of fifty or sixty in the last few years became consumptive while at the hospital, and she died after a year's illness.

An ingenious plan to decide the question of the communicability of phthisis was instituted by the British Medical Association by establishing the Collective Investigating Committee. This committee sent out questions relating to this subject to all the members of the Society. Of 1,028 replies received, 673 negatived the idea of a contagium, while 261 replies favored it. According to these statistics, there is a manifest majority in favor of the non-contagiousness of phthisis; yet such a plan is unsatisfactory, as the answers may be of unequal value, as their worth must be estimated in proportion to the experience and authority of the sender.

Not without interest is the observation of Prof. Corradi, of Pavia, who noted that out of 133 families in which he had cases of consumptives, in only 25 of the families were there more than one member of the family ill of that affection.

There is no proof whatever that tuberculosis is conveyed from person to person by contagion. Seeming exceptions to this assertion can almost always be accounted for in some other way.

The assertion that the wife may contract the disease from the husband I have pointed out, in a former paper, to be untenable; and I have also indicated that a predisposition to scrofulosis may be acquired from the unwholesome mode of life led, of necessity, by such individuals. Besides, it is established statistically that nearly one third of all deaths occurring in middle life are due to phthisis. In view of the frequency with which this malady occurs, intermarriage between scrofulous individuals may be almost as common as between non-scrofulous persons.

The view taken that children become scrofulous by contagion from phthisical parents, may be met by the fact that instances have occurred where a number of young children of phthisical parents were early removed from their homes and distributed among healthy families, and yet all, sooner or later, became phthisical.

Healthy persons have even been fed on bovine tuberculous material (which is considered identical with human tuberculous material, and have thrived on it, as is proven by the interesting feeding experiments made upon man and recorded by Schottelius, (Virchow's Archives, No. 91, 1883). The circumstances which led to this experiment were as follows:

In Würzburg, the sale of meat affected by pearl-disease or bovine tuberculosis is permitted, but, as some opposition to its sale once arose, a community of country people agreed to use exclusively tuberculous meat, on account of its cheapness and in order to prove that it was harmless. From Oct., 1867, to Nov., 1868, 49 tuberculous beeves, with well-pronounced lesions, were consumed by the people while they were under the supervision of the district physicians. In many instances the meat was eaten raw in consequence of habit. Ever since then, those people have continued the use of tuberculous meat, and thus far no bad results have been noticed; in fact, the record says that the people referred to are unusually healthy.

NOTE.—The concluding chapter will be furnished at once. It refers only to the diagnostic value of the tubercle bacillus, to the deficiency of the experimental proofs for the specific action of the bacillus. and to experiments proving that tuberculosis may be induced by non-tuberculous substances and simple irritants, in support of the statements made in the body of this paper.

THE DISTRIBUTION OF THE POISON THROUGH THE BODY AFTER DEATH FROM ARSENIC.

BY V. C. VAUGHAN, PH.D., M.D., AND J. H. DAWSON, PH.C.

Some months ago we reported in this journal a series of experiments which showed the diffusion of arsenious acid through the body when suspended in water and injected into the mouth and rectum after death. We have to report some experiments on the distribution of the substance after fatal arsenical poisoning.

Has arsenic any predilection of tissue?

Scolosuboff,[1] in 1875, reported that he had found, in experimenting upon animals, the largest amounts of the poison in the nervous tissue. He poisoned the animals with the arsenite of sodium, and after death estimated the amount of poison in 100 grams each of muscle, liver, brain and marrow. Representing the amount he found in the 100 grams of muscle by 1, that found in the same amount of liver would be represented by 10.8, that in the brain by 36.5, and that in the marrow by 37.3. Scolosuboff supposed that the arsenic replaced phosphorus in the lecithin of nervous tissue. This work has been frequently referred to in trials for murder by arsenical poisoning.

Ludwig,[2] in 1879, from experiments upon animals, and from the examination of the bodies of suicides, came to conclusions quite different from those of Scolosuboff. In all of Ludwig's experiments, he found a greater proportion of arsenic in the liver than in any other part of the body. In cases of acute poisoning, he found the kidneys also rich in arsenic, while the bones and the brain contained only small quantities. However, he mentions no case where a fatal dose had been taken in which he did not find some arsenic in the brain.

In the case of a suicide by acute arsenical poisoning, the results of Ludwig's analyses were as follows:

The liver, whose weight was 1480 grams, furnished 0.1315 gram of ammonio-magnesic arseniate, while the brain, whose weight was 1481 grams, furnished only 0.0015 gram of the same compound of arsenic. From 144 grams of kidney he obtained 0.0195, and from 600 grams of muscle 0.002 gram of ammonio-magnesic arseniate. In the bones, only traces of the poison were detected.

It will be seen from these figures that while the weights were substantially the same, the former contained about 90 times as much arsenic as the latter. It will be noticed, however, that Scolosuboff used sodium arsenite, which is more soluble and diffusible than arsenious acid.

Johnson and Chittenden[3] report the analyses of different parts of the body of Mrs. Riddle, poisoned. They found in the liver, which weighed 590 grams, 0.04788 grams of arsenious oxide (As_2O_3), and in the brain, which weighed 477 grams, only an unweighable trace. From these analyses, which embraced sections of nearly every part of the body, they calculated the total amount of arsenious oxide in the body to be 5.2261 grains. This was supposed to be a case of chronic poisoning.

In the case of Mary Stannard, whose death was supposed to have taken place shortly after the administration of the poison, Johnson found 83.23 grains of arsenious oxide in the stomach, liver and other internal organs, "while the brain contained a hardly perceptible trace of arsenic.

Of course, the unknown elements in all cases of arsenical poisoning are many and important. The exact amount taken, the amount removed by vomiting, and the time of administration are often unknown.

Johnson and Chittenden also made one experiment upon a large coach dog, which was poisoned by the administration of 6.5 grams of arsenious oxide in doses of from 0.1 to 2.5 grams per day for eight days. Twenty-four hours after the administration of the last dose, the animal was killed, and the different organs submitted to analysis. 100 grams of liver furnished 0.0010 gram of metallic arsenic, while the entire brain gave only a faint mirror.

Since these questions are of great importance in medico-legal investigations, and as the evidence furnished by the experimenters mentioned above is conflicting in some points, we determined to seek, experimentally, answers to the following questions:

(1.) In what proportion is the poison distributed to the various tissues in chronic poisoning by arsenious oxide?

(2.) What is the distribution in acute poisoning by the same poison?

(3.) What is the distribution in acute poisoning by the more soluble sodium arsenite?

Of course, these questions can be answered only in a general way. If the conditions of the experiment are varied, we should expect the results to differ in a greater or less extent.

The first experiment, representing a case of chronic arsenical poisoning was conducted on a small dog as follows: 685 grams of solid white arsenious oxide were given to the dog with meat during a period of sixteen days, in doses increasing from 0.335 to 1 gram. Seventy-two hours after the last dose was administered, the dog was killed and the following parts removed, and a quantitative estimation of the arsenic which they contained, made with the following results:

	Weight taken grams.	As_2O_3 Found.	Percentage of As_2O_3
Spleen	18	.00062	.00344
Kidneys	65	.00065	.00100
Liver	260	.01040	.00400
Lungs	95	.00040	.00042
Stomach and contents	152	.02530	.01664
Large intestine	42	.01520	.03619
Small intestine	70	.00030	.00042
Muscles from thigh	116	.00031	.00026
Muscles from abdomen	95	.00020	.00021
Heart	175	.00034	.00019
Blood	60	a very faint mirror	

[1] *Bulletin de la Société Chimique de Paris*, 24, 124.

[2] *Wien. Acadamie Auzeiger*, 1879. 181.

[3] *American Chemical Journal*, 2, 332.

Urine	41	.00060	.00146
Testicles	22	.00030	.00136
Brain	71	.00013	.00018
Total	1282	.05475	.00419

The second experiment represents cases of acute poisoning with arsenious oxide, and was conducted as follows. Two rabbits, one large, and the other small, were given arsenious oxide. To the larger, two grams were given, and to the smaller one gram was given. They died in about ten hours, and the following parts were removed and a quantitative estimation of the arsenic which they contained was made:

Large rabbit weighed 1520 grams.

	Weight taken grams.	As_2O_3 found	Percentage of As_2O_3
Kidneys	20	.00132	.00660
Liver	25	.00264	.01056
Lungs	7	.02640	.37714
Stomach and contents	170	1.62400	.95529
Large intestine	156	.23760	.15230
Small intestine	55	.00158	.00287
Muscle from abdomen	40	.00026	.00065
Muscle from thigh	47	A distinct mirror.	
Heart	10	.00124	.01240
Brain	5	A distinct mirror.	
Total	535	1.89504	.35421

Smaller rabbit weighed 562 grams.

	Weight taken grams.	As_2O_3 found.	Percentage of As_3O_3
Kidneys	8	.00053	.00662
Liver	32	.00164	.00512
Lungs	12	.01320	.11000
Stomach and contents	75	.66200	.88266
Large intestine	62	.05702	.09196
Small intestine	40	.00343	.00857
Muscles from abdomen	12	.00013	.00108
Muscles from thigh	12	A slight trace.	
Heart	5	.00026	.00520
Brain	4	A distinct mirror.	
Total	262	.73821	.28175

The third experiment represents cases of acute poisoning with sodium arsenite, and was conducted as follows: Two rabbits, one large and the other small, were given arsenious oxide in the form of sodium arsenite ($Na_3\,As\,O_3$). To the larger 2 grams were given, and to the smaller 1 gram was given.

Larger rabbit weighed 1,977 grams; died in 20 minutes.

	Weight taken. Grams.	As_2O_3 found.	Percentage of As_2O_3
Kidneys	19	.00330	.01736
Liver	65	.01548	.02381
Lungs	45	09240	.20533
Stomach and contents	70	.86100	1.23000
Large intestine	137	.04224	03083
Small intestine	37	.00489	.01321
Muscles from abdomen	55	.00198	.00360
Muscles from thigh	65	.00119	.00183
Heart	10	.00264	.02640
Testicles	13	.00026	.00200
Brain	5	.00053	.01060
Total	521	1.02591	.19691

Smaller rabbit weighed 464 grams; died in 4 minutes.

	Weight taken. Grams.	As_2O_3 found.	Percentage of As_2O_3
Kidneys	5	.00119	.02380
Liver	36	.00831	.02308
Lungs	8	.01056	.13200
Stomach and contents	31	.54120	1.74580
Large intestine	73	.05795	.07938
Small intestine	21	.00660	.03142
Muscles of abdomen	10	.00066	.00660
Muscles of thigh	10	.00053	.00530
Heart	2	.00158	.07900
Testicles	0.9	A slight mirror.	
Brain	3	.00019	.00633
Total	199 9	.62877	.31454

In these experiments the organic matter was destroyed by chemically pure hydrochloric acid and potassium chlorate. The arsenic was obtained by the Marsh test, and weighed in the metallic state.

It will be seen that in the case of chronic poisoning, for equal weights, the brain contained about one-sixth as much as the liver. In the cases of acute poisoning by the oxide, the amount in the brain was an unweighable quantity. In the case of poisoning with the arsenite, the amount in the brain is larger than when the less soluble oxide was given.

UNIVERSITY OF MICHIGAN, January, 1884.

GENERAL PARALYSIS FOLLOWING DIPHTHERIA. A CASE.

BY CHARLES WESLEY ROOK, M.D., QUINCY, ILL.

In the JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION, vol. 1, page 649, two cases are noted of the rare sequel "General Paralysis After Diphtheria."

Having within my care, at the receipt of the above mentioned article, a little patient to whom had occurred this rare and distressing sequel, now that the case is terminated, I deem it a professional duty to give a report of the same.

For a brief and concise history of this pathological condition, its association, in the relation of cause and effect, with diphtheria, and for theories concerning its cause or causes, the reader is kindly referred to Trousseau's Clinical Medicine, vol. 1, p. 382, ed. 1882.

November 28, 1883, I was recalled to Stella P., æt. one year and six months, whom I had recently attended during an attack of diphtheria, together with four other members of the family, including the mother, who were also sick with diphtheria. By the close of the second week of treatment all the members of the family were convalescent, except one little girl, æt. three years, who died of diphtheritic croup at the close of one week of sickness.

On November 4, the subject of this report, though much emaciated, her pharynx being perfectly free of any diphtheritic membrane, was discharged. During the interval, elapsing between November 4 and November 28, I saw her twice and was much gratified at the rapid advances that she seemed making toward a complete recovery. When called, Wednesday, No-

vember 28, her mother said that the Saturday previous Stella did much running and playing in the yard; while playing, she was frequently observed to lie down on her back, cry for a few moments, and strike with her feet as if they were giving her pain, then getting up would go on playing as usual. On Sunday and Monday her gait became very unsteady, and on Tuesday she was unable to walk. Wednesday, when placed upon her feet, could stand for only a moment, then would sink to the floor. By inclining her body forward, while supporting her upon her feet, she would make a feeble attempt to walk, but was unable to raise her feet and bring them forward. Examination proved the muscular tissue of the legs to be soft and flabby, the skin of a pale blue color, and the feet and legs, though covered with two pairs of stockings and kept close to a stove, were extremely cold. At the same visit it was noted that the muscular and coördinating powers of the hands and arms were apparently unaffected. The appetite was poor, but the child seemed very thirsty, and at nearly every attempt to quench her thirst, she would strangle, an attack of coughing would be induced, and the greater portion of the liquid would be returned, through the nostrils, to the cup. Her pharynx was completely free of any diphtheritic deposit. The actions of the bowels and bladder were regular. Albuminuria is said to be present quite generally, but I was unable to get a specimen of the urine for examination. The respiration and pulse were somewhat accelerated.

December 1, was hastily summoned, and learned that Stella had had a convulsion, following an attack of coughing, occurring soon after eating dinner. This, I think, was due to some article of food getting into the air-passages. She was very fretful and restless, especially of nights, not even permitting a light blanket to cover her limbs. December 4, I called. Found Stella sleeping. Her left axilla and ilium were approximated several inches nearer than normal, because of a tonic contraction of the muscles of the left side of her body. The muscular power and voluntary movements of the hands and arms were becoming impaired.

Though seen daily, no marked change other than the gradual loss of power in her hands and arms was noted until December 10, when I called and found the surface of her body hot and dry; pulse 160 per minute; the respiration rapid, feeble and shallow; the pupils widely dilated; was unable to raise either hand from off her chest, and in addition to the other symptoms noted, was a tonic contraction of the cervical and dorsal muscles, so that the weight of her body was supported by the occiput and sacrum. During the continuance of this cervical and dorsal muscular rigidity, which was four days, the limbs were completely relaxed, so that we could extend or flex them into any desired position.

Also during this interval of four days there were visual disorders. The pupils remained dilated so that she did not seem to see or recognize her friends. Convergent strabismus was also present, apparently equally affecting each eye, for upon attracting her attention by the exhibition of some plaything, she would fix the object first with one, then with the other eye. December 13, she was attacked with purulent ophthalmia; the discharge, which was profuse, thick and yellowish, continued for three days, then gradually disappeared At this time she had a very troublesome cough, the attacks of which seemed to be precipitated by her attempts to swallow liquids. December 17 she was attacked with a slight diarrhœa, which was probably reflex in nature, as she was at this period cutting her superior and inferior canine teeth. The paralytic symptoms were slowly disappearing. December 21, was still improving; drinks without becoming so frequently strangled; her cough less troublesome, and she sleeps well of nights. December 28 she made her first attempt to crawl and walk since she became paralyzed. January 1, 1884, continued her efforts at walking, but because of her weak and emaciated condition the attempts were but feebly executed. Her appetite was increasing, and the excretory functions were normal. January 9, convalescence being established, my little patient was discharged.

In order to complete this report, I called January 28, and found Stella so completely recovered as to leave not a trace of her recent serious illness.

The plan of treatment adopted was the following: For the indications present when first called this combination was ordered:

℞ Tr nucis vomicæ. sp. chloroformi, āā. ℥ss; acidi nitro-muriatici dil., ℥j; inf. gentianae, q. s. ℥iij. M. S.: A teaspoonful three times a day.

This prescription was continued until December 9. December 3, being very fretful and restless, she was quieted with the $^1/_{32}$ of a grain of morphia sulphatis. This amount was occasionally exhibited to quiet her restlessness throughout the course of her illness. December 8 and 9, two applications were made, of four minutes each in duration, of a mild induced electrical current. December 10, the paralytic symptoms being greatly augmented, and because of the inability to swallow, the nux-vomica preparation and the application of electricity were discontinued, and in their stead, rectal injections of equal parts of spiritus frumenti and milk were ordered. December 13, the $^1/_{50}$ of a grain of nux-vomica was ordered twice daily. For the ophthalmia, was directed thorough and frequent cleansing with cold water. December 14, to relieve the cough the following was given: ℞ tr. chloroformi, ℥j; acidi hydrobromici, ℥ij; syr. scillæ, ℥iij; syr. simp., q. s. ℥iv. M. S.: One-half teaspoonful every six hours. December 18, the nux-vomica was increased to the $^1/_{50}$ of a grain three times a day. December 19, as a general tonic, the following was administered: ℞ tr. ferri chloridi., ℥ss; extractum malti, q. s., ℥ij. M. S.: One teaspoonful three times a day. The three latter prescriptions were continued until convalescence was attained.

AN AGED PHYSICIAN.—It is reported that Dr. Jakinoriez, of Jarvszinka, in the Government of Kiew, Russia, has just died at the age of 107, and that he was able, until nearly the close of his life, to superintend the working of an extensive practice.

MEDICAL PROGRESS.

MATERIA MEDICA AND THERAPEUTICS.

Anæsthesia by a Mixture of Morphia, Atropia and Chloroform.—Dr. C. Aubert communicates to the *Société de Biologie* (*Comptes Rendus*) the results which he has obtained in his surgical practice by preceding the use of chloroform by the injection of

Morphia chlorhydrate.....10 centigr.
Atropia sulph..... 5 milligr.
Aqua dist.....10 grams.

He uses 1½ grammes of this solution 20 or 30 minutes before beginning the inhalations. In children he uses not more than 1 gramme. He has used this method in more than 60 cases, and, as far as the atropia is concerned, has never seen the slightest disagreeable symptom, no dilatation of the pupil, perhaps a little dryness of the throat, and considers that these agents furnish great security against the danger of cardiac syncope following chloroform inhalations. The advantages claimed, are: First, the security. Second, the greater rapidity with which anæsthesia is produced. Third, the absolute quiet of the patient. Fourth, the facility of awakening. Fifth, the absence of subsequent discomfort and vomiting.

As to security, he refers to one case where in an aged subject there existed adhesions of the pleuræ, extensive pulmonary emphysema, marked mitral insufficiency, interstitial nephritis and purulent cystitis, as proven by the autopsy three weeks later; this method was followed. and there was no perceptible influence upon the pulse. It is true that there was cyanosis which required the use of artificial respiration for two minutes. He accepts, therefore, the views of MM. Morat and Dastre that atropia diminishes the excitability of the pneumogastric.

As to the rapidity of its action; out of 40 patients 4 came under its influence in 1 minute, 5 in 1½ minutes, 12 in 2 minutes, 6 in 2½ minutes, 4 in 3 minutes, 2 in 4 minutes, 4 in 5 minutes, 1 in 6 minutes, 1 in 7 minutes, and 1 in 10 minutes—giving a mean of 3 minutes.

Narcosis by Chloroform, by Ether, and by Nitrous Oxide.—Neudörfer (in the *Deutsche Zeitschrift für Chir.*) investigates the above, and comes to some highly important conclusions, which may be thus summarized. 1. Air cannot hold more than 20 per cent. of its bulk of chloroform-vapour at the ordinary temperature and pressure. 2. Chloroform acts as a poison upon the red blood corpuscles, but only slowly, even upon corpuscles at rest, whilst those circulating through the lungs are not long enough under its influence to be destroyed. 3. It has been found by Bernard, Gréhant, Hoppe-Lezler, and Hermann, that hæmoglobin has a greater affinity for carbon monoxide than for oxygen, and for nitrous oxide than for carbon monoxide. In other words, in presence of an excess of carbonic oxide the blood cannot absorb oxygen, and in presence of an excess of nitrous oxide the blood cannot take up either carbonic oxide or oxygen. Hoppe-Lezler and Gréhant think that if the weakest of these gases (in their affinity for hæmoglobin) be previously present in excess, it hinders absorption of the gases of stronger affinity. As to this, the authors think that it does not hinder this absorption, but that the latter are thus rendered innocuous, and also that the affinity of hæmoglobin for oxygen is not constant, but varies within certain limits. 4. If to an individual, whose hæmoglobin has a relatively weak affinity for oxygen, we give to narcosis a mixture of 20 volumes of chloroform-vapour to every 80 volumes of air, he breathes a mixture holding 16 per cent. of oxygen, instead of the usual 20 per cent. in the air, and it may happen that he may take up little or no oxygen, and the chloroform may exert its fatal effect. This is a simple and sustained method of explaining death by chloroform. 5. Now, arguing by analogy, since the very poisonous carbonic oxide can be rendered innocuous by the previous presence of other gases in excess, it is to be presumed that in a mixture of chloroform-vapour and oxygen, the chloroform could not exert its evil effects upon the blood corpuscles. 6. There would be no danger of oxygen poisoning, for the quantity given would be within the limits of the variations of oxygen taken up in nasal respiration. 7. The bad after-effects of chloroform would be done away with. 8. Twenty per cent. of chloroform-vapour would be unnecessary, since three to five per cent. are quite enough. 9. As to ether, it can be mixed up with oxygen up to forty-three per cent., but it cannot compete with chloroform, because it possesses no constant chemical constitution, and its behaviour to human tissues is more prejudicial than that of chloroform. 10. The mixture of nitrous oxide and oxygen acts equally as well as the chloroform and oxygen mixture. 11. Oxygen is easily administered by Simonson's apparatus, 12. Narcosis thus caused is absolutely devoid of danger.

MEDICINE.

Morphia Habitues.—Dr. Benjamin Ward Richardson (*Lancet*) read a paper on this subject before the Medical Society of London on December 10. His remarks were directed especially to the habitual hypodermic injection of morphia, the dose varying from less than a grain to fifteen grains per diem. He gave the summary of symptoms in a case of daily injection of three grains and a half for a period of two years as being as follows: (*a*) Torpidity in the action of the liver; (*b*) abscess forming at or near the site of puncture; (*c*) tendency to local induration, and (*d*) a free excretion from the bronchial surface; (*e*) difficulty, occasionally, in swallowing morsels of small substances, as if the object were arrested in its passage owing to its becoming enveloped in a layer of tenacious mucus; (*f*) a tendency at times to violent perspiration, more often present when the morphia has been almost entirely excreted, or when the system has been much debilitated; (*g*) various perversions of sensations; (*h*) occasional difficulty in articulation, like that resulting from alcoholic excess; (*i*) impotency; (*j*) difficulty of breaking off the habit owing to craving for the narcotic, and symptoms of

debility when it was left off; (*k*) mental exaltation and depression, with tendency to exaggerate dangers; (*l*) excessive excitability of the imagination when reading, *e. g.*, works of fiction; (*m*) lessened sensitiveness and receptivity with inclination to apathy, varied, it may be, with brief periods of mental exaltation.

The more serious subjective and objective symptoms induced by deeper indulgence in this habit were defined as: Increased appetite for the morphia; loss of will power; confirmed apathy from the ordinary toxic effects of opium; failure of all the mental faculties, together with general failure of voluntary and involuntary muscular power. Diminished vitality, with bending of the body and the signs of premature old age.

PULSATING LIVER.—Dr. Walter G. Smith (*Dublin Journal of Medical Science*) reports a case of this character in a soldier 35 years of age, who suffered from lung trouble and some anasarca of the legs not higher than the thighs; was a free drinker. The skin of the face and hands was dusky in color, and there was visible pulsation in the jugular veins, which were of immense size. Albuminuria; liver dullness 2½ inches below the ribs on the right side, and to within 2 inches of the umbilicus in the middle line; margin readily felt. A distinct pulsation of the liver was visible in the epigastrium, extending over the right and left lobe. Subsequently the liver increased in size, and the lungs became engorged, while at times a triple cantering sound was heard over the apex of the heart, and the systolic murmur became more distinct. The area of cardiac dullness appeared to be enlarged, and the apex beat was visible in the sixth intercostal space. In support of his proposition that the phenomenon was principally the result of a retrograde venous wave from the right ventricle, he mentions:

1. The expansile sensation communicated to the fingers when placed upon the liver.

2. The duration of the pulsation. It continued after the ventricles ceased to act.

3. As the condition of the patient improved under treatment, the hepatic pulsation became less and less. If the hepatic pulsation were due altogether to direct shock, the contrary would be the case, for steadier and more forcible action of the heart would materially increase the pulsation.

He asks the following questions: Ought pulsation of the liver to be regarded as evidence of regurgitation through the tricuspid orifice? How does the regurgitation of blood into the hepatic veins in sufficient force to visibly agitate the liver, sometimes occur? And why is it not more frequently observed in old-standing cases of mitral disease?

Respiration aids the venæ portæ in accelerating the blood-current through the liver, and this is favored anatomically by:

1. The trunks of the hepatic veins, which almost pierce the tendon of the diaphragm, to join the inferior vena cava.

2. The hepatic veins cannot collapse when subjected to atmospheric pressure (because of their parenchymatous attachment).

3. During the inspiratory descent of the diaphragm the vena cava is straightened, and the course of the hepatic veins made more direct. Conversely, during expiration the venous trunks between the liver and the heart are shortened, and the opening in the diaphragm is diminished, counteracting the tendency to regurgitation. But if, under any circumstances, regurgitation of blood from the right heart takes place, here is a condition especially favorable for communicating to the liver as a whole any pulsation caused by reflux into the inferior vena cava and large hepatic veins. The degree to which the liver can yield is regulated by the elasticity of the enveloping capsule of the liver and of its peritoneal covering. Hence, inflammatory thickening of the capsule is an obstacle to pulsation.

SURGERY.

CATHETER FEVER.—Sir Andrew Clark (*Lancet*) on a recent occasion brought this subject before the Clinical Society of London, but as the constitution of that society did not permit such abstract questions to be discussed, on December 17 he addressed the Medical Society of London, giving his views more in detail, and recounting the history of medical observations and records of catheter fever from 1800 down to the present day. He offers the following propositions:

First, that about middle life in men perfectly healthy, or with no discoverable evidence of disease, except perhaps, and even that not always, a low density of urine, the commencement of the habitual use of the catheter is sometimes followed by fever of the remittent type, which often ends in death, and that for the fatal issue in such cases no adequate structural explanation can be found.

Secondly, that it is important that such a fever, arising in the midst of apparent health from such a seemingly small cause, and leading so often (as it certainly does) to a fatal issue, should be well and widely known, lest death should take the friends of the patient by surprise, and arrangements necessary to the welfare of a family should be left unmade.

Thirdly, that although it is well known that in persons affected with renal disease, or with chronic gout, or with grave disorders of the general health, the commencement of habitual catheterism is attended with peril to life from secondary fever, the fact that this fever may arise in what seems to be good health, and without the mediation of any visible structural lesion, issue in death, is not well known.

Fourthly, that this fever is neither distinctly uræmic nor distinctly pyæmic; that although having some of the characters of each, it has all the necessary characters of neither; that probably it begins in the nervous system; that probably the disturbance of the nervous system reacts in the first instance upon the general metabolism of the body, and in the second instance upon the secretory organs, beginning with the kidney; that the effect upon the kidney may consist either in structural alterations of the kidney, or

in alteration of the constitution of the blood, that dynamic condition of its constituents in the renal vessels essential to the elaborative action of the secretory cells thereof; and lastly, that the concurrence of these conditions may be, and often is, enforced by septic reabsorption into the blood.

Fifthly, that a more complete knowledge of this variety of fever, and of the conditions of its origin, maintenance and increase may, at least we may hope, lead to a material diminution of its mortality; and that even now, by treating in a serious manner entrance upon cather life by great temperance in the use of foods and stimulants, by rest, warmth, and by other general means, such mortality may be possibly considerably diminished.

Two questions of a practical kind arise out of this study of the history of catheter fever. The first is: As there is no account of the fever following in cases where narcotics or anæsthetics have been used, may it not be that the fever is capable of being cut short by the administration, on entering upon habitual catheterism, of narcotic or anæsthetic remedies? The second is: Assuming the presence of the fever, and seeing that quinine has signally failed in controlling it, what are the drugs to be employed on such occasions? And what is the sort of hygienic management to be followed, especially in respect of food and alcohol, which are so variously used on such occasions, in order that the fever may be brought, if that be possible, to a successful ending?

Sugar as an Antiseptic Dressing.—Dr. Fischer states that Prof. Lücke, of Strasburg (*Centralblatt f. Chir.*), has since May last been making trials of sugar as a pulveriform antiseptic. He has used it mixed with equal parts of naphthaline or with a fifth part of iodoform, enclosing it in gauze bags, which are fixed over the wound after the application of sutures. When the skin is defective, the sugar is strewn over the wounded surface. The wound has been disinfected during the operation by means of a 1 per cent. sublimate solution. The dressing may remain on the part from a week to a fortnight, until the sugar becomes dissolved, the secretions from the wound diffusing themselves equally throughout the sugar. If, however, the sugar is applied too thickly (*i. e.*, more than half a centimeter), it forms into lumps. The wounds thrive under the sugar, the dressing emitting no bad smell nor exhibiting bacteria. The granulations are well developed, having no inclination to bleed, and cicatrization proceeds rapidly. In wounds united by suture, primary union has always been obtained. The experience thus far gained justifies the recommendation of further trials of a remedy so easy to obtain.—*Med. Times and Gazette.*

The Use of Hodge's Pessary in Fractures of the Lower Jaw.—Dr. W. J. Naismith (*Lancet*) describes a fracture of the lower jaw at the symphysis, with a transverse wound two inches in length over the mental protuberance. The fragments of the jaw were freely movable, and it was desirable to apply an apparatus which would fix the bone in place immovably, and at the same time allow the wound to be dressed. Accordingly, a Hodge's pessary was brought into use, by bending it so as to allow the chin to protrude through its ellipse. One bar was moulded so as to support the fracture anteriorly, the other steadied it from below, while the rounded ends afforded admirable lateral pressure on each side, at a point in front of the angles of the jaw. To the rounded ends of the pessary tapes were sewn, two on each side, over the padding, and secured over the head, or to a fillet, and around the neck by small buckles. For fractures of the inferior maxilla at or near the symphysis, with or without wound, the Hodge's pessary seems well adapted. It can be bent to fit any size of jaw, and in the qualities of comfort, lightness and coolness compares very favorably with the solid, cumbrous appliances included under the head of moulds.

TOXICOLOGY AND MEDICAL JURISPRUDENCE.

A Rapidly Fatal Case of Arsenical Poisoning. Dr. David W. Finlay gives a case in the *Lancet* of a man fifty-one years of age, in moderate health, who swallowed, by careful computation, twenty-six grains of arsenious acid; was seen and prescribed for within a half hour; had not vomited, but the stomach pump was used freely, with no benefit, for he died in just one hour after swallowing the fatal dose. His symptoms were generally those of collapse; nothing at the post-mortem indicated any particular poison, until the contents of the stomach were analyzed.

A recent non-medical French writer (A. Cels. Bibliothicaire de l'Université de Bruxelles) in reviewing the *Manuel du Bibliothecaire*, of M. J. Cousin, takes occasion to emphasize the fact that the form of the Index catalogue of the Library of the Surgeon-General's Office, U. S. A., will be universally adopted by librarians as fast as it becomes known to them. He reviews this mode of cataloguing, giving to it the name of "*Le systéme Billings*;" and concludes by addressing a request to the *savant* Dr. Billings, that he publish a new manual, which will, beyond doubt, replace all of those which have been published up to the present time.

The Wooden Leg in the Gallic-Roman Period.—Our friends the archæologists are exciting themselves in France over the discovery on pieces of ancient pottery two delineations of figures wearing each a wooden leg. M. Emile Riviere, in the *Gazette des Hopitaux*, has an interesting article on the subject which is well illustrated; one of the figures is that of a male playing on the harp, or lyre; this is supposed to be Apollo, and the writer quotes M. Maximin Legrand as follows: "Have you ever heard, my dear readers, that the grandfather of medicine had his leg broken? As for me, I am absolutely ignorant of the fact. I have heard of the death of Adonis and of the mutilation of Atys, as names which, among the ancients, personified the sun, and of whom the death or debility, always followed by a resurrection or cure, symbolized the conditions of universal life, or simply the order of the seasons. But a wooden leg! of what can it be the symbol?"

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WAS the New York State Medical Society "extruded from membership" in the American Medical Association, or did she take herself out by *her own act?*

In another column of this number of the JOURNAL will be found a letter from New York signed "Vindex," and written by one of the most intelligent and influential of the members of the New York State Medical Society who were active leaders in the movement that resulted in the adoption by that society of a new code of ethics as a substitute for the National Code in 1882. We invite particular attention to this letter, as it is a fair example, both in its temper and its carelessness of statements concerning facts and events, of what has been written and said by the party the writer represents during the last two years. The leading object of "Vindex" in writing his letter appears to be the correction of the impression conveyed in the leading editorial in this journal of January 26 ult., that the New York State Society had voluntarily cut herself off, or severed her connection with the American Medical Association by her own deliberate act. On this point he uses the following language: "It (the State Society) did not. It was *extruded* from membership in that body (the American Medical Association) by the action of its Judicial Council at St. Paul in 1882, which action the Association, as a body, assumed by adopting the report of said Council."

In further proof of such "extrusion," he says the State Society sent delegates to the meeting of the National Association at St. Paul; that he, as one of the delegates, presented his credentials to the Registration Committee at an early hour on Tuesday morning, June 6, and was told, in a not very polite way, that the Judicial Council had determined, at a meeting held on the previous day, which would have been on Monday, June 5, "to throw out the credentials of the delegates from the Medical Society of the State of New York" If our friend "Vindex" had ever taken the trouble to examine with reasonable care the constitution and by-laws of the American Medical Association, or even read the official record of the proceedings of the Association at St. Paul, he would not have committed the mistake of representing the Association as *adopting* the report of the Judicial Council, when the decision of that tribunal is final without further action of the Association. Nor would he have gone so far astray in his memory as to represent the registration officer as saying that the Judicial Council had decided on the previous day to "throw out credentials," instead of what the officer doubtless did say, namely, that protests had been lodged with the Registration Committee, and that under the by-laws the credentials and protests must be reported to the Association and referred to the Judicial Council before the registration could be effected.

Neither would he have represented the Judicial Council as acting upon a matter on Monday, which could by no possibility have come before it until after the papers had been presented, by the chairman of the Registration Committee, to the Association on Tuesday morning, and by that body referred to the Judicial Council. If Vindex, or any of our readers, will turn to the volume of Transactions of the Association for 1882, pages 59 and 60, he will find that the first meeting of the Judicial Council was convened at ten o'clock on Tuesday morning, June 6, at which officers were elected, and action taken on a case concerning the Nebraska State Medical Society which had been referred to the Council the year previous, and on nothing else. The next meeting was at five o'clock P. M. of the same day. At that meeting, the protests and papers in reference to the right of the Medical Society of the State of New York to be represented by delegates in the Association, were received from the Permanent Secretary, the same having been referred by the Association during its general session in the morning. They were examined, together with a certified copy of the new code of ethics adopted by that State Society at its annual meeting in February preceding. A final decision was deferred until the third meeting of the Council, held at 8:30 A. M. on Wednesday. At that meeting, after further consider-

ation, the Council arrived at the following decision, which was reported to the Association near the close of its general session on the same day:

"Having carefully considered the Code of Ethics adopted by the New York State Medical Society at its annual meeting in February, 1882 (as furnished by the Secretary of said Society), the Judicial Council finds in said revised Code provisions essentially differing from, and in conflict with, the Code of Ethics of the Association, and therefore, in accordance with the provisions of the ninth By-law of this Association, decide unanimously that said New York Medical Society is not entitled to representation by delegates in the American Medical Association." See Transactions, Vol. 33, p. 33.

The ninth by-law referred to in the above report is in the following words:

"No State or local medical society, or other organized institution, shall be entitled to representation in this Association that has not adopted its Code of Ethics; or that has intentionally violated or disregarded any article or clause of the same." See Transactions, Vol. 33, p. 629.

With this plain and explicit rule, as a condition of representation in the Association, published in every annual volume of Transactions for more than twenty years; and the equally direct statement of "Vindex" in his letter, that the Medical Society of the State of New York had actually adopted in February, 1882, a new code as a substitute for that of the American Medical Association, can any intelligent reader entertain a doubt as to whether such action of the State Society necessarily deprived her of all right to further representation in the national organization. The decision of the Judicial Council simply declared the fact ascertained, that the State Society of New York had "violated or disregarded" the Code of Ethics of the Association and in *consequence* of such action was not longer entitled to representation in that body. That the action of the State Society in repudiating the Code of Ethics of the Association directly in violation of the by-law quoted, caused the EXTRUSION, is too plain for argument.

Instead of correcting anything contained in our leader of January 26, the letter of "Vindex" contains a full acknowledgment of the fact, that the work of revising and altering the National Code of Ethics was entered upon by the State Society of New York in 1881, and completed at the annual meeting in February, 1882, without the slightest regard to the fact that said National Code had been compiled and adopted by a national organization composed of her own delegates, in association with delegates from the State societies of all the other States, and who had consequently an equal interest in it with herself.

Though a member of the committee that did the *revising*, he says he "did not hear any discussion in regard to the American Medical Association." The truth is that "Vindex" and his co-laborers in the work of ethical revising, had given very little attention to the national organization for years, and appear to have had very little knowledge of its constitution or conditions of membership.

Under the specious pretense of reforming and liberalizing the ethical rules governing consultations, they proceeded with their work without fairly realizing the undesirable position in which they were placing their State Society in its relations to the Association and all the societies of other States, until they appeared at St. Paul as delegates from a society whose right to representation had been forfeited, in part at least, through their own influence.

Their position is an awkward one, and we can appreciate the underlying chagrin that prompts their irritability when the plain facts are brought to their notice, but instead of floundering from one false position to another, until new State and local societies are formed all over their State, and their representatives admitted to the national organization, and to fellowship with the societies of other States, why not manfully acknowledge the primary error, undo the objectionable work, resume the former relations of harmony with the national and State organizations of the Union, and then propose whatever changes may be desired, and let them be considered and acted upon by the representatives of the whole profession, where such consideration rightfully belongs.

What the letter of "Vindex" says about the framing and promulgating an "iron-clad oath," is fully and correctly answered in THE JOURNAL for January 19, 1884, and is too absurd to require further notice. The resolution which he proposes for the Association to adopt, as an act of reconciliation, is more curious than important. The credentials of a delegate consist of a certificate by the proper officer of some medical organization that the bearer A. B. has been duly elected or appointed a delegate to the American Medical Association. To be "duly accredited," it must be from a society or organization entitled to representation under the constitution and by-laws of the Association. What the laws regulating the practice of medicine have to do with such certificate it is difficult to conceive.

DR. ELISHA HARRIS, of New York, died a few days since in the city of Albany. He had been many

years connected with the departments of health and public charities, and was one of the most eminent sanitarians in this country. A more extended sketch of the life and labors of the deceased will be found under the head of Necrology in the next number of THE JOURNAL.

MISSING NUMBERS OF THE JOURNAL.—We have calls for a few copies of Nos. *two* and *six* of THE JOURNAL that we are not able to supply at present. We again request anyone who may have duplicate copies of these numbers to re-mail them to this office; and if any one has received and paid for these numbers who do not care to keep them, we will pay four times the subscription price for their return in good order to us.

WINTER CHOLERA AND HOG CHOLERA.—Dr. F. Dedolph writes from St. Paul, Minn., suggesting that the so-called winter cholera, which has been noticed in various places during the last few years, is caused by the use of lard and oleomargarine prepared from hogs affected with the disease known as hog cholera. This letter contains a printed slip showing that he made the same suggestion three years since. But as he gives no facts or investigations bearing upon the subject, we give his suggestion here instead of his letter.

SOCIETY PROCEEDINGS.

KALAMAZOO ACADEMY OF MEDICINE.

The Kalamazoo District Medical and Surgical Association has recently been incorporated in accordance with the laws of the State of Michigan, under the style "Kalamazoo Academy of Medicine." The meetings of the Academy are held in the city of Kalamazoo the last Tuesday of each alternate month of the year, beginning with January. It invites to its membership all regular practitioners of medicine or surgery in Southwestern Michigan. The Secretary would be glad to receive the names of any who desire to unite with the Academy. The meeting held January 29 was a most profitable and pleasant one for all. The officers elected for the year 1884 were: President, Josiah Andrews, of Paw-Paw; First Vice-President, Foster Pratt, of Kalamazoo; Second Vice-President, O. F. Seeley, of Clina; Secretary and Librarian, H. B. Hemenway, of Kalamazoo; Treasurer, O. B. Ranney, of Kalamazoo. Board of Censors (term expires in three years): H. O. Hitchcock and W. L. Worcester, of Kalamazoo; (term expires in two years) Foster Pratt and J. W. Fiske, of Kalamazoo; (term expires in one year) L. D. Knowles, of Three Rivers, and O. F. Burroughs, of Galesburg.

THE SUFFOLK DISTRICT MEDICAL SOCIETY.

SECTION FOR CLINICAL MEDICINE, PATHOLOGY, AND HYGIENE.

ALBERT N. BLODGETT, M.D., SECRETARY.

December 12, 1883.—The meeting was called to order at 8 o'clock by Dr. R. T. Edes, chairman.

The first paper of the evening was read by Dr. E. O. Otis, entitled

THE USE OF TOBACCO AMONG BOYS.

Dr. H. I. Bowditch, in opening the discussion, said that it is high time that some measures were adopted to stop, or at least to restrain, the use of tobacco. For thirty years he has continually found a certain number of patients who have presented the symptoms of grave functional disturbance of the heart, for which no cause could be found except tobacco. There is no organic cardiac lesion, but it is a nervous weakness. This condition was very commonly observed during the late war. Nearly all the soldiers smoked, and many gradually acquired what was appropriately named the "tobacco heart." The reason why this condition prevailed so extensively at the time mentioned, is no doubt found in the fact that tobacco enables men to endure hunger, cold, hardship, and privation better than they could without its aid. The active, exposed muscular life of the army enabled the soldiers to withstand the injurious effects of this substance better than would be the case in a sedentary occupation, or where one lives as a recluse. A moderate use of tobacco may unquestionably be continued for a long time, and probably indefinitely, without harm. There are few people in adult life who would derive any injury from three cigars daily; but the danger comes from the fact that the number is increased to ten or fifteen, and sometimes even to twenty-five in a day. Nearly all boys now smoke cigarettes to an inordinate extent, and it is painful to look forward to their future condition.

In habitués of tobacco we frequently find errors of digestion, sometimes of most refractory character, though many persons commence to smoke from the supposition that the digestion is benefited by the use of tobacco. There is no question upon the fact that mental disease may be induced by the poisonous action of nicotine; and many smokers who are not insane have been rendered exceedingly nervous and irritable by the prolonged use of tobacco, and immediately give unmistakable evidences of absolute derangement if the customary indulgence is for any reason withdrawn. The duty of physicians would seem to be to endeavor to restrain the use of tobacco to an amount which shall not be injurious; for no attempt to stop its employment would probably be successful. Above all we should seek to restrict its use among students and youths generally. Punishment, such as expulsion or suspension from school, should be attached to disobedience, and all proper means shuld be employed to protect our scholars from its influence. The medical profession should take a decided position upon this important subject. Not only tobacco, but all stimulants should be restrained to a

limit within which they can do no harm. Tea and coffee should doubtless be included in the category of agents capable of harm. When in Paris, in 1854, Dr. Bowditch found the favorite *café noir* to be such a nervous stimulant that he was able to work all night without the least feeling of fatigue. On returning to America, however, he found himself unable to follow his professional duties with his accustomed energy, but felt a great sense of lassitude and depression. He now reduced the use of coffee to once a day; but after three or four months he found himself subject to attacks of palpitation and cardiac pain, which recurred with considerable regularity. Dr. Jackson examined the heart, but could detect no organic lesion, and advised abstinence from coffee, upon which all symptoms at once disappeared. After a time the use of coffee was again commenced; whereupon the previous disturbances of the heart were soon reproduced. The harmful agent was again abandoned for 15 years, when being once more in Europe, coffee was resumed in small quantity, but within a short time the old symptoms all recurred in a more intense form. Since that time no coffee has been taken, and no further trouble has been experienced. The human system seems never to fully recover after once being thoroughly saturated with any of these subsances. The same is true of alcohol.

Dr. George B. Shattuck thought it a too common habit, in speaking of these matters, to make the *abuse* and the *use* of a substance synonymous. It is also common to form general conclusions in regard to the effects of stimulants and narcotics from personal and individual experience, and to apply to our neighbors the rules we find necessary for ourselves. It is possible to be indiscreet and to commit excesses with beefsteak as with tobacco, and the individual should decide what *his* system requires. The subject of discussion before the Society, however, the speaker suggested, was the use of tobacco by *boys;* and in regard to this he felt sure that the members present would cordially agree with the paper of the reader, Dr. Otis, and with its conclusions that the use of tobacco by the immature, even in moderate quantities, is injurious and undesirable.

Dr. Harlow observed that if tobacco retards development during the years of growth, it must continue to be a harmful substance even after the body has reached its full growth, and would work injury at any time of life. If it irritates the heart in a boy, it will do so to some extent in a man. President Quincy was accustomed to advise students against the use of tobacco or stimulants while engaged in their collegiate course.

Dr. Marcy stated that when a surgeon in the army he had observed occasions when tobacco was a godsend to the soldiers in aiding them to endure hardship and privation, and cold and hunger. There are some organisms to which it may be of questionable benefit, but it is a serious injury to any growing person. There is no doubt that a popular vote would be largely against the general use of tobacco.

Dr. Prince thought a distinction should be made in the form in which tobacco is employed—whether in cigarettes, or cigars, or a pipe. Cigarettes probably make a more lasting impression upon the system than cigars, and are harder to renounce. There is a popular impression that the principal injury comes from the paper containing the tobacco. This is not true. In cigarette smoking the vapor is inhaled, and coming in contact with the delicate mucous membrane of the air passages, its active properties are at once absorbed, and produce an immediate effect, which can be perceived to the tips of the fingers. The succeeding sensation is one of ennui, malaise, indolence, and muscular hebetude, which soon becomes burdensome unless the stimulation be renewed and prolonged by a fresh cigarette.

Dr. Marcy said that the question of the *form* in which tobacco is used is really important, if we are to judge of the *effect* from the quality of the substance employed. Many cigars are made from refuse of all kinds, which is pressed into shape and inclosed in a genuine tobacco leaf for a wrapper, while cigarettes more generally contain pure tobacco, particularly when they are made by the smoker as required for use. Certainly, as far as wholesomeness and cleanliness are concerned, cigarettes must be ranked as far preferable to cigars.

Dr. Langmaid stated that the most important questions in cigarette smoking are these: Does the inhalation of the vapor induce any disease of the mucous membrane with which it comes in contact? Does the smoke act upon the mucous membrane simply as smoke, or from the fact that it contains nicotine? Does smoking increase naso-pharyngeal catarrh? To these an affirmative reply must be given. If the mucous membrane is irritated, smoking invariably makes it worse. Will smoking produce a catarrhal state when none exists, or awaken a new one in a patient who has been cured of the disease? Observation teaches that it can do this. There is an increased secretion from the membrane, and all the other features of a catarrhal condition. Singers almost invariably abstain from smoking on those days upon which they expect to sing.

Dr. Bowditch added that he will not treat a patient for sore throat unless smoking is abandoned for the time. He has, however, never observed any affection of the bronchial tubes as indicated by râles or other physical signs, which could properly be laid to the influence of tobacco.

Dr. Cutler asked if any distinction was to be drawn between smoking and chewing. He stated that a teacher told him that students became much more stupid after smoking than after chewing tobacco. Dr. Mussey has made the same observation in regard to the mental depression from tobacco.

Dr. Edes remarked, in closing the discussion, that the subject had been presented with great clearness and in a very unprejudiced manner. One of its excellent features was the absence of exaggeration upon a topic which is generally discussed in an eminently partisan manner. There is no doubt something to be said on both sides.

Dr. George M. Geddes presented the next subject of the evening, as follows:

THE TREATMENT OF FOLLICULAR TONSILLITIS.

Follicular tonsillitis is a self-limited disease, which runs its course in a certain limited time, presents a sequence of definite and successive phenomena, and finally returns to a normal condition in about the same interval of time, whether any active treatment be employed or not. Any treatment, therefore, is directed chiefly to minor points, such as (1) the rapidity of relief; (2) the time when the patient may return to business; (3) the convenience and comfort of the patient as far as the method of treatment is concerned, and the ease with which the remedies can be applied. The disease invariably presents itself in one of two types. First, there is a type in which the follicles are stuffed full, with swelling of the parts, general malaise, high temperature, and great prostration. The malaise lasts from twenty-four to thirty-six hours, and subsides entirely without treatment. I generally give some quinine and a gargle, because it seems necessary to give something in order to minister to the feelings of the patient and his friends, but the cure would take place equally well without any treatment whatever. In the second type there is high fever, considerable pain, prostration, and high pulse. The patient is in bed and appears very sick. The general symptoms far outrank the amount of disease in the throat. This variety lasts from three days to a week or fortnight, running through a similar series of changes, excepting that they are sometimes more pronounced, as are observed in the milder variety of tonsillitis. The tonsils gradually return to a state of health, and the patient is cured just as in the type before mentioned. I have seen advised and have tried some of the nastiest things which can be made in the form of gargles. There is no danger attending the disease itself, there is no necessity for treatment of any kind, and, above all, there is no excuse for anything in the shape of disagreeable treatment of this disease by dirty and nauseous mixtures. The question of treatment rests only on the plea of shortening the disease and benefiting the patient. My plan is about this: Where the temperature is elevated to about 102° F or 103° F, I first give the patient a *sweat*. I do this by means of aconite. I prescribe five drops of the tincture, and direct that one-third be taken immediately, one-half of the remainder in half an hour, and the rest in an hour. I then give five grains of Dover's powder, and cover the patient warmly up to the neck. When sweating commences I give all the water the patient desires for two hours. At the end of that time the sweating is generally pretty profuse. The patient is dried and allowed to get on the dry side of the bed, and is directed not to rise until the next day. My apology for the sweat is that it always relieves the sore throat, back-ache, pains in the limbs, and nausea. The relief to the throat from aconite is very great, so much so that the patient can generally take milk with comfort, which he could not do before. The next day there is only slight further treatment for the throat. I generally direct the patient to gargle with hot water; and by hot water I mern *very hot*, as hot as the patient can bear it. Hot water is preferable to cold. There is no treatment before the sweat, and no call for anything further after the gargle. Each time the hot water is used the patient feels better. There is do excuse for carbolic acid or any other medicament. No germicide can be used in sufficient strength to affect bacteria without being injurious to the throat. After the treatment above described there is generally constipation, which is relieved by a seidlitz powder; and I usually prescribe quinine as a tonic, to be taken for some time afterward in small doses.

My reason for introducing the subject of the treatment of follicular tonsillitis is, that many physicians do not understand that it is a self-limited disease, and will do very well if let alone. They prescribe some disagreeable or disgusting gargle, which the patient often will not use, and sometimes cannot, and which it is practically impossible to employ in the treatment of children, who do not know how to gargle, and who resist anything of a disagreeable nature in the throat.

In a recent number of a Philadelphia medical journal I find an article by a man of that city upon this subject, and I desire to call the attention of the Section to the plan of treatment there advocated. If anything more nonsensical in theory or more disgusting in character can be put together, I do not know what it is. First, the throat is gargled or swabbed with a solution of equal parts of tincture of chloride of iron and water. This is repeated every two hours. The patient is confined in the bed, and not allowed to get up. Ten grains of quinine are given, and repeated in four hours if the fever has not subsided. This treatment is followed up until the throat symptoms disappear, and is then replaced by a tonic. The writer adds, "cases usually recover in about a fortnight." Think of a child gargling the throat with a 50 per cent. solution of chloride of iron! And the rest of the treatment there advocated is fully as unnecessary as it is painful to the patient and burdensome to the friends. I claim that such treatment is not only useless but unjustifiable in any disease which is bound to get well anyway, and which we can influence by measures equally effectual and less troublesome.

Dr. Liebmann observed that in tonsillitis there is, according to the books, general malaise but no rigor; while in diphtheria there is rigor. It is frequently the case that diphtheria comes on very insidiously, and commences as a tonsillitis, often confined at first to one tonsil, but afterward extending to the other, and being followed by the usual local signs and constitutional symptoms of diphtheria. It is a mistake to suppose that the onset of diphtheria is always announced by a rigor. Tonsillitis may be preceded by a chill, while diphtheria often supervenes without any such symptom.

Dr. Langmaid said: The great interest in follicular tonsillitis consists not in what the disease *is*, but in what it is *not*; in other words, in the absence of any exanthem, or parenchymatous disease, or deep-seated infiltration of the throat or other parts, and in the freedom of the patient from any symptoms of a more serious malady. We are never sure that the sore throat, the follicular disease, may not be the local manifestation or the initial symptom of some

grave constitutional affection, and we should be ever on our guard. The patient should be watched, and the same precautions observed in mild cases which would be necessary in a far more serious disease. It is not certain that the particular process of sweating has any advantage over the aconite alone, or over the old time remedy for sore throat, nitrate of potash. The pain in the muscles is often relieved by the administration of salicylate of soda. All the older authorities speak of colchicum and guiac, and they evidently considered the pains as of rheumatic character.

Given a case such as is described by Dr. Garland, how can the physician be certain that the superficial inflammation is not to be followed by abscess of the parts? Dr. Garland does not, probably, mean to indicate that *all* cases should be looked upon as absolutely innocent. How can he know that, instead of the creamy deposit, there may not supervene a thick deposit and all the signs of a grave exudative disease?

Any one who has had the care of diphtheria must feel anxiety upon this point. A subsequent visit should always be made, in order to be certain that no dangerous condition has supervened upon the simple tonsillitis. After the exudation there is sometimes serous infiltration of the tonsil, and the symptoms of diphtheritic infection appear.

The observer in Philadelphia is not so far wrong, for he doubtless felt the apprehension of some grave complication, and was striving to ward off more serious evils.

Dr. De Blois remarked that there is tonsillitis and *tonsillitis*. In many cases the patient is unable to open the jaws; and when the throat can be examined, there may be very little observable change in the tonsil. Scarification of the gland is often a most beneficial mode of treatment.

On motion of Dr. De Blois, it was then voted that the further discussion of this subject be postponed until the next meeting, as an invited guest of the Section, who was present, had a very interesting case to show to the members.

The report was divided at this point, and the rest published one week later.

THE TREATMENT OF CLEFT PALATE.

Dr. H. A. Baker, by invitation, exhibited a patient for whom he had contrived an improved appliance for cleft palate.

Dr. Henry J. Bigelow remarked that it is quite exceptional that staphyloraphy alone without an obturator does much service to the speech. It is not difficult to get a union of the fissure, or of most of it, but the flaps are usually so tense afterward from the contraction of the dissected surfaces behind the palate that the play of the palate necessary to articulation is prevented. I have, therefore, usually recommended patients to get one of the varieties of artificial palate or obturator, whether inflexible, like Suersen's, or flexible, like Kingsley's, and to submit only to so much operation as may be necessary to keep it in place. After an operation, patients expect to talk at once, but they cannot do so. A long education is needed to show any considerable improvement in alternating the mute and nasal consonants. As a rule, there is no improvement of speech at first. Fifteen years ago I devised a short series of exercises in articulation for a patient I operated upon. It begins with the only consonant which a patient can usually best articulate, namely, "*t*" in "*tar*," and gradually leads to the rest, constantly referring to the acquired "*t*" as a point of departure. Here it is, as it was the printed for the private use of a patient:—

"The great difficulty in pronouncing correctly with a cleft palate is in distinguishing the nasals from the mutes; thus, p and b from m; pap or bab from mam; t and d from n; tat from nan; k and g (hard) from ng.

"'Tar' is well pronounced by most beginners with an obturator. When the beginner can pronounce 'stark' and 'car' he has the key to most of what here follows. The above words should be practiced carefully; not 'start' and 'tar,' but 'stark' and 'car,' and should be spoken loudly, or, as the elocutionists say, 'exploded.'"

1.	tar	artar	kar	arkar	kar
2.	kar	arkar	arkgar	kgar	gar
3.	kar	arkar	arkdar	kdar	dar
4.	kar	arkar	arkpar	kpar	par
5.	kar	arkar	arkbar	kbar	bar
6.	kar	arkar	arklar	klar	lar
7.	kar	arkar	arksar	ksar	sar

Practice all the above with the following vowels:—

8. o as in coke.

Thus, instead of kar, akar, etc., ko — oko — oklo — klo — lo.

9. a (long) as in cake.
10. i as in kite
11. e as in keep.
12. u as in suit.

13.	kar	arkar	arngar	arkar	arngar	kar	ngar
14.	tar	artar	arnar	artar	arnar	tar	nar
15.	par	arpar	armar	arpar	armar	par	mar
						bar	mar
						dar	mar
						sar	rar

(Practice reading loudly from a book.)

"February, 1870."

Dr. Geo. F. Grant spoke as follows: In the physiological treatment of cleft palate, there are many points which require the most careful consideration. I have listened to the paper of Dr. Baker with great interest, because the subject is one to which I have devoted much time and attention, and during the past 14 years have treated over 70 cases of congenital cleft palate. While I may claim to have succeeded in almost every case in securing a good articulation, there have been great variations in the degree of success, as well as in the length of time which is required for the patient to master the art of distinct articulation and enunciation.

At the commencement I made the mistake of expecting too much from the appliance unaided by proper direction to the patient in its use, that is to say, after adjusting the palate it was my practice to give the patient an exercise in sounds, simply requesting him to follow me in their pronunciation. This plan did not prove satisfactory in all cases, and I now often wonder how so many did so well under so imperfect a system of training.

It soon became plain to me that patients of this class required to be taught the art of correct articulation technically, just as we are taught any other art

which depends upon accurate technique. This fact applies also to the sister art of enunciation, and although there is quite a wide difference between these two factors of speech, they are so closely allied in this particular branch of study that they may be considered as one in speaking of them in this relation.

I found that this class of patients is almost universally deficient in the management of the breath; that in the use of the voice they speak directly from the lungs without any check at the larynx as is the case in normal speech, and where this fault does not exist, they attempt the closing of the nose by using the depressor muscles of that organ, and thereby disfigure the face greatly.

While this fault exists, the development of correct habits of speech is impossible; for many if not all the sounds of the language require for their proper enunciation that the air column be under the most perfect control. For example, most patients are quite unable to give the sounds of those letters which are classed as labials, with any force whatever after being taught the method, simply because they do not have the power of sustaining a sufficient pressure of air. The proper thing to do is first to teach them to control the breath. It is best to give them a tube of some description, and teach them to blow through one end while the other end is immersed in water; the bubbles which arise are a good indication of the progress which is being made. They are then taught to check the air in the throat by the tongue, and by distending the cheeks make a reservoir of the mouth which furnishes air to the tube while the lungs are being filled through the nostrils, so that a continuous stream of air passes through the tube. This, many of you will recognize as the method of using the blow-pipe, familiar to chemists and artisans. I know of no plan which so rapidly gives the patient that control of the breath so necessary to the first steps in articulation. This practice gives tone and strength to the lips and cheeks, the muscles of which I have observed to be much weaker than in persons of normal formation. I have seen many patients who could apparently distend the cheeks as well as any one, when in reality there was little or no pressure upon the inside, and the act was a fictitious one, as the cheeks would not sustain percussion.

After I have taught a patient to direct a column of air through the lips and to control its passage, it is much easier to instruct him in applying those modifications to the air current which constitute articulate speech. These modifications are taught singly, and the proper position and conditions of the organs employed in the production of a sound are ocularly demonstrated, first, because the patient can more quickly understand what he can *see;* secondly, because it is of the greatest importance that the best skill should assist in developing the work which the appliance is designed to accomplish.

I have only time to say that this plan or system which has been slowly and practically developed has for its basis the reduction (by analysis) of speech to its simplest mechanical principles, and no effort has been spared to bring the mastery of those principles within reach of the most ordinary intelligence. I do not agree with much that has been written and said regarding the classification of the sounds in the language. But have one remark to make regarding the most common error which, as I believe, can be shown by a little reflection. It is a common belief that patients of this class must struggle with the consonants, while the fact is that with a few exceptions the vowel sounds are much the most difficult to teach them, because the vowels are more dependent upon the quality of the voice as a whole than upon any position or local arrangement of the organs of speech, consequently a patient may be technically correct as to articulation and have a most unpleasant enunciation, due entirely to faulty location of the vowel sounds. That is, a patient may be able to give the sounds of simple single letters or elements, and yet be unable to converse or read distinctly, because the voice has not received attention.

Few of these patients have made use of the anterior portion of the mouth in their efforts to articulate. Their whole mechanism has been misdirected to an almost vertical line with the larynx, so that if the same line were followed with a normal palate the voice would pass through the nares behind the palate, instead of being thrown upon the anterior portion of the soft palate and the whole of the hard palate, and then by reflection through the lips, as should be the case.

If you have followed me to this point, you will observe that I have first taught the patient that he must have the air to make the sounds under his control; secondly, he has been taught how to employ it in conjunction with the organs of speech in forming the parts of speech; now it remains to show him where to put it. We all agree that those sounds, or tones rather, which have the best penetrative power and are most clearly enunciated have a high or sharp pitch; then the next thing to consider is how is it produced. Why are some men's voices so much clearer in tone than others? Some of it is due no doubt to anatomical causes, the height of the dome of the palate for instance. But still there are physiological reasons. The man who enunciates best, and whose voice has purity and clearness of tone, makes it better still by careful study and training. He brings the focus as far forward upon the palate as it is possible to do; the sound wave from the larynx is projected as far upon the anterior portion of the palate as possible, by holding the head in an erect position and opening the throat, thus bringing the tongue forward. It is this very point which it is important to impart to a patient with cleft palate, and which is necessary for him to master in order to complete the work which an artificial palate makes possible. No enunciation is good without it; no articulation can be secured which will repay the trouble unless careful attention is given to these points, and I have seen so much accomplished by these methods that it seems almost a possible thing to train a patient into a fair articulation without any appliance. Two quite remarkable cases have come under my notice. In both the fissure was quite large, in one patient extending through the soft palate, in the other through the soft and half

way through the hard palate. In both cases the articulation was remarkably good, and either by accident or training the method in one was almost faultless, so that I advised the patient to let well enough alone.

A word about appliances. Dr. Baker's appliance seems to me to be the addition of a hinge to a modification of the Suersen obturator made by Dr. Kingsley, of New York. The original Suersen obturator was a solid bulb of hard rubber, so shaped as to retain contact with the divided palate under all conditions, and at the same time close the opening into the nares by the contact with the superior constrictor of the pharynx. Dr. Kingsley's improvement consisted in making the bulb hollow, and placing it so as to slide upon a bar until the most effective position was determined, and then securing it in the desired position. The method of making the bulb hollow, and the conclusions at which he arrived regarding the comparative value of the Suersen and Kingsley systems, may be found in the book on Oral Deformities, by Norman W. Kingsley.

Dr. Kingsley is of the opinion that a soft rubber appliance is best to acquire articulation with, while the hard rubber might be inserted with good results after articulation had been acquired, and I coincide with that view; for when a case of cleft palate has been brought to a successful result, and the palate is then removed, the patient is in a position analagous to perforate palate.

The articulation exists, and only requires mechanical aid, so that whatever meets that requirement suffices.

There are objections to soft rubber as a material, but it has proved of much benefit as an aid in giving the best results in acquiring good articulation, and in that respect surpasses anything which I have seen. I do not think Dr. Baker did it justice in his remarks upon it, for he must have known that if it was properly made, the die in which it was made was a permanent mould, which rendered the vela capable of easy and limitless duplication, and so easy of adjustment that it could be sent to any part of the world, or, if necessary, made or duplicated by any dentist who would follow the directions which accompany it.

The cleanliness depends upon the individual, as does the cleanliness of anything worn about the person.

The best results are dependent solely upon skillful manipulation, and no appliance can be successfully adapted by an unskilled hand. There can be no fixed rule to follow; each case presents new features, which must be met as they appear. My preference is for the soft rubber, because it more readily fulfils the requirements, and because it has done better work than any appliance which I have yet seen, though I have seen a few cases in which the hard rubber obturator had proved very beneficial.

I will not intrude further upon your time than to say that one of my greatest complaints against the Suersen principle has been that it seems almost impossible to obtain a clear voice with it, a fact which I have attributed to its thickness obstructing the posterior portion of the nares, and in Dr. Baker's appliance I cannot see that the hinge obviates that difficulty.

The patient was then introduced, and the appliance could be seen in the mouth, and, by causing him to swallow, the relation of the instrument to the wall of the pharynx and to the alæ of the velum palati could be easily observed. It was evident that in the act of deglutition no communication between the nasal cavity and the pharynx existed, the posterior part of the obdurator being raised up by the superior constrictor muscle of the pharynx, and pressed firmly against the posterior wall of the pharynx at the line of the naso-pharyngeal junction. The patient now removed the appliance, when an enormous fissure was disclosed, extending from a point near the incisor teeth through the entire hard palate and velum. Upon being asked to read, it was quite impossible to understand what the patient was saying. After replacing the appliance the same sentences were read, and every word was spoken with great distinctness, and could easily be understood by every person present. After this the patient was asked to read some new selection, and opening a book at random, commenced as follows: "Physicians generally agree that the moderate use of wine is beneficial." At this point the audience, pleased with the improvement in speech, and possibly desiring to express approbation of what was read, burst into applause, and appeared to be perfectly satisfied as to the usefulness of this instrument in cases of cleft palate. The patient remarked that he found the greatest comfort and solace in the fact that with the appliance in his mouth he was able to smoke, while without it he could not draw the vapor of the tobacco from the pipe into the mouth. With it, also, he can whistle, which he cannot do without it.

On motion of Dr. Marcy, it was voted that the thanks of the Section be rendered Dr. Baker for his important communication of original studies upon a most difficult subject, and demonstration of ingenious mechanical appliances for the remedy of cleft palate.

On motion of Dr. Prince, a vote of thanks was tendered to the retiring chairman, Dr. George B. Shattuck, for the zeal and fidelity with which he has conducted the deliberations of the Section during the past two years.

Adjourned at eleven o'clock.

DOMESTIC CORRESPONDENCE.

NEW YORK LETTER.

To the Editor of The Journal of the American Medical Association:

Dear Sir:—In your issue of January 26, 1884, is a leader headed "An Ethical Symposium," in which you make animadversions upon the action of the Medical Society of the State of New York in amending its Code of Ethics in 1882.

The argument of your leader is obviously intended to propagate the idea that the Medical Society of the State of New York voluntarily and intentionally seceded from the American Medical Association. It did not. It was extruded from membership in that body by the action of its Judicial Council at St. Paul

in 1882, which action the Association, as a body, assumed by adopting the report of said Council. These and some other facts in the matter should be stated again, as your leader was evidently written by some one who either does not know them, or refrained from using them.

In 1880, New York State passed an act regulating the practice of medicine within its borders. The year following, the Medical Society of the State appointed a committee to revise its code. I was on that committee, and did not hear any discussion, if any occurred, in regard to the American Medical Association. The revision was made to conform, in its text, to the provisions of the revised statutes of the State, and the claims of public policy, and was done under the advice of some of the best legal minds of New York City. The code, as revised and reported, was adopted by the New York State Society without even a verbal amendment, in 1882.

After this action, the society sent delegates to the meeting of the American Medical Association at St. Paul. The first session of the meeting occurred on Tuesday. The writer, at an early hour on that day, presented his credentials, and was told in a rugged, not to say impolite manner, that the Judicial Council of the American Medical Association had determined, at a meeting holden the previous day, to throw out the credentials of the delegates from the Medical Society of the State of New York. The writer, on two occasions during that session of the Association, asked the President of the Association for an opportunity to be heard in regard to the action of the Judicial Council. That official declined to give him any such opportunity. It was obvious that the American Medical Association was in the grasp of a few men who, through the Judicial Council, exercised their unchecked sway. The writer, not desiring to create tumult in such a body, contented himself with quietly taking part in the affairs of the meetings in his capacity of permanent member and delegate from the Medical Society of the County of New York.

In 1883 the Medical Society of the State of New York did not elect delegates to the American Medical Association. At that meeting the Judicial Council of the Association, in the exercise of its assumed high prerogative, framed and promulgated an iron-clad oath intended to keep out of the meeting any one who would even call in question, the wisdom of its Code, or if he did call it in question to place him in so doing in the attitude of having subscribed to a code which he intended to defy or subvert.

I have no doubt that the State of New York will again be in the American Medical Association, but not till the American idea of federation is exemplified in its laws and practice.

The passage of some such resolution as the following would, no doubt, bring about so desirable a result, namely: "Resolved, that no delegate, otherwise duly accredited, shall be excluded from a seat in the Association, whose credentials are plainly consistent with the laws regulating the practice of medicine in the State or Territory from which he comes." That would carry out the American idea of federation, and throw back upon the States the responsibility of legislating for the regulation of the practice of medicine. Some prejudices would have to be set aside to make way for such freedom, but in the end those States would exercise, by common consent, the greatest influence for good in the Association, in which the profession had ripened best under the influence of good schools; aided by good laws. Every State and Territory would, as in the American system, have the moral and political weight it was entitled to, and there would be something more in the American Medical Association than a doubtful "flavor of nationality." I am, dear sir, yours respectfully,

VINDEX.

FOREIGN CORRESPONDENCE.

FROM PARIS.

PARIS, January 16, 1884.

In opening his course of lectures as Professor of Clinical Obstetrics, to which chair he had recently succeeded the late Prof. Depaul, Prof. Pajot pointed out the necessity of adjoining a chair of gynæcology to that of obstetrics, as he said that both branches were so intimately connected that he could not understand how such a desideratum was allowed to exist, and he believed that France stood alone in this respect. Under existing arrangements gynæcology is not taught at the medical schools, nor is it officially recognized as a part of the medical curriculum in this country, the consequence is, a great number of students leaving the medical schools are completely ignorant of this most important branch. It is true the students obtain a theoretical knowledge of the principles of gynæcology, but when examined clinically they display an amount of ignorance which should not be allowed to exist. Simple gynæcology could not be taught at the lying-in hospital, as patients were admitted only to be confined, and they left it on the ninth day after confinement, unless they were not considered in a fit state to do so. Professor Pajot opened his new course under the most favorable auspices. He has promised great improvements and stated that as far as lay in his power he would raise obstetrics from its present obscure and cirumscribed position to which a narrow-minded prejudice has hitherto assigned it.

There is much ado about the consumption of American pork in this country, as a short time ago a slight epidemic of trichinosis occurred at Crépy-en-Valois, which was attributed to the use of American pork, but it was ascertained that the pork was absolutely French, as the pig to which the origin of the epidemic was traced, was killed in this country. The epidemic, however, was soon got under, and did not extend beyond the above-named town. In September last an epidemic of trichinosis broke out at Emersleben, near Halberstadt in Germany, and Professor Brouardel was deputed by the French Minister of Commerce to proceed thither to study and report upon the epidemic. He was accompanied by Dr. Grancher, whose conjoint report was submitted to the Minister of Commerce, and as it was demonstrated

that the trichinosis was only caused by eating pigs' flesh in a raw or uncooked state, a practice so common in Germany, there was little fear of the malady gaining ground in France, as almost every article of food was submitted to heat or to some culinary process. Moreover, the origin of the German epidemic was traced to an English pig that had been lately imported, and as there was nothing else to incriminate American pork, the Minister of Commerce thought proper to remove the prohibition on that article, as it constituted the principal food of the working classes, particularly among the peasantry.

The question was again brought before the Chamber of Deputies by M. Paul Bert, as well known as a politician as a physiologist, who moved that the recent decree rescinding the prohibition should not be carried into effect. This was carried by a large majority at the Chamber, so that the first decree still remains law. The Minister of Commerce, however, not being satisfied with the unceremonious manner with which his orders have been treated, re-transferred the matter to the Academy of Medicine, where it has been freely discussed.

M. Bouley, the well-known veterinarian, proved that the interdiction of American pork was a mere delusion; that during the twenty years prior to the interdiction American pork was freely eaten in France, and yet he had not heard of a single case of trichinosis in it. But the ludicrous part of the affair is that since the prohibition was decreed in 1881, the importation continued all the same; only instead of coming direct to this country, the American pork passed through England and Belgium, where no case of trichinosis had been heard of. The deduction, therefore, is that the nocuity of American pork is only another scare. The French must always have one to keep their restless minds occupied, and if they have no real subject for agitation they must invent one, and this applies as much to special or general questions as it does to their politics.

The question in dispute has been consigned to a commission, and perhaps nothing more will be heard of it for some years. Meanwhile the very people whom M. Paul Bert pretends to protect (and they are the great majority of the population) will be the greatest sufferers in a commercial as well as a sanitary point of view, for as long as the prohibition lasts they must be deprived to a certain extent of a most precious and economical article of food.

At a recent meeting of the French Society of Temperance a discussion took place on the propriety of adding strychnine to alcoholic drinks, as recommended by Dr. Luton of Reims, with the view of counteracting the ill effects of these liquors. Dr. Dujardin Beaumetz, having studied the subject more closely by experiments on animals and by personal observations of the effects of strychnia in the human subject, has come to the conclusion that, whilst the drug is capable of controlling the functional manifestations of drunkenness, it had no influence for good over the effects of alcohol on the different organic tissues of the body. He would therefore recommend that strychnia be left in its proper place as a therapeutic agent of great value in certain forms of disease, to wit, those produced by the abuse of spirituous liquors, and should not be introduced for daily use under the pretence of imbibing the antidote with the poison.

The Prefect of Police has issued some strict regulations respecting lodging-houses or furnished apartments in Paris, as these have been found in a notoriously unsanitary condition. No room is to be let that did not measure two and a half meters in height, and did not have a cubic space of fourteen cubic meters per occupant. The walls and floors are to be regularly cleaned, and proper means of ventilation should be provided for each room. Cellars are not allowed to be used as dwellings. To carry out these regulations the lodging-houses will be periodically visited by a staff of inspectors, and any infringement of the above rules will be severely punished.

A. B.

MISCELLANEOUS.

NEW BOOKS.

Leube, Wilh. Ueber die Bedeutung der Chemie in der Medicin. 8vo. 56 pp. Berlin: Hirschwald.

Verhandlungen der deutschen Gesselschaft f. Chirurgie, 2. Congress Abgeh. zu Berlin vom 4–7 April, 1883. Berlin: Hirschwald.

Wagner, Adph. Ueber die Hernia properitonealis. Inaugural Dissertation 8vo. 118 pp. Dorpat: Schnakenburg.

Wernich. Lehrbuch f. Heildiener. Mit Berueecksicht der Wundenpflege. Krankenaufsicht u. Desinfection. 8vo. viii. Berlin: Hirschwald.

Zabludowsky, J. Die Bedeutung der Massage f. die Chirurgie u. ihre physiologischen Grundlagen. 8vo. 39 pp. Berlin: Hirschwald.

Zeckendorf, Emil. Ueber die Pathogenese der Bauchtympanie, ueber Beiträgen zur Lehre vom Stoffwechsel bei der Hysterie. Inaugural dissertation. 8vo 37 pp. Göttingen: Vandenhoeck & Ruprecht.

OFFICIAL LIST OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT UNITED STATES ARMY, FROM JANUARY 25, 1884, TO FEBRUARY 1, 1884.

Alexander, Charles T., Major and Surgeon: so much of Par. 7, S. O. 211, Sept. 14, 1883, as directs him to report in person to the Commanding General Department of the Missouri, for duty, is revoked, and he will, upon the expiration of his present leave of absence, proceed to St. Louis, Mo, and assume duty as attending surgeon and examiner of recruits in that city. (Par. I, S. O. 21, A. G. O., January 25, 1884.)

Elbrey, Frederick W., Captain and Assistant Surgeon: present leave of absence extended 6 months. (Par. 9, S. O. 24, A. G. O., January 25, 1884.)

LIST OF CHANGES IN THE MEDICAL CORPS OF THE NAVY, DURING THE WEEK ENDING FEBRUARY 2, 1884.

Passed Ass't Surgeon Robt. Whiting, detached from the Hospital, Norfolk, and to the "Colorado."

Ass't Surgeon H. B. Fitts, detached from the "Jamestown," and ordered to Coast Survey Str. Gedney.

Passed Ass't Surgeon F. Anderson, granted leave of absence for six months.

P. A. Surgeon S. W. Battle, detached from U. S. S. Gedney, and placed on sick leave.

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THE AMERICAN MEDICAL ASSOCIATION

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—THE—

Journal of the American Medical Association.

EDITED FOR THE ASSOCIATION BY N. S. DAVIS.

PUBLISHED WEEKLY.

VOL. II. CHICAGO, FEBRUARY 16, 1884. No. 7.

ORIGINAL ARTICLES.

REPORT OF THE STANDING COMMITTEE ON METEOROLOGICAL CONDITIONS AND THEIR RELATIONS TO THE PREVALENCE OF ACUTE DISEASES.

BY N. S. DAVIS, M.D., LL.D., OF CHICAGO, ILL., CHAIRMAN OF THE COMMITTEE.

[Presented to the American Medical Association in session at Cleveland, Ohio, June 7, 1883.]

[Continued from No. 4, Vol. II.]

The following tables present in a condensed form the amount of free and albuminoid ammonia in the atmosphere in the city of Chicago, at a station where the population is moderately dense, of good quality, with fairly good sewerage and water supply, as determined by Prof. Long for each day of the twelve months ending August 31, 1883: *

AMOUNTS OF AMMONIA GIVEN IN GRAMS, IN 1,000 M³ OF AIR—OBSERVATIONS FROM 8 A. M. TO 8 A. M.

DATE.	SEPTEMBER, '82.		OCTOBER, '82.		NOVEMBER, '82.		DECEMBER, '82.		JANUARY, '83.		FEB'Y, '83.	
	Ammonia.		Ammonia.		Ammonia.		Ammonia.		Ammonia.		Ammonia.	
	Free.	Alb.	Free.	Alb.	Free.	Alb.	Free.	Alb.	Free.	Alb.	Free.	Alb.
1— 2	.000	.020	Trace	.066	.012	.072	.011	.094	.039	.082	.072	.133
2— 3	.050	.072	.033	.136	.015	.103	.000	.050	.006	.100	.094	.155
3— 4	.022	.044	.022	.100	.011	.061	.012	.039	.017	.135	.089	.155
4— 5	.045	.083	.027	.072	.022	.120	.050	.165	.022	.072	.056	.072
5— 6	.066	.093	.022	.065	.009	.073	.016	.056	.045	.110	.022	.066
6— 7	.100	.135	.017	.094	.016	.084	.000	.110	.023	.068	.022	.071
7— 8	.134	.105	.016	.067	.017	.094	.011	.112	.017	.089	.028	.056
8— 9	.084	.100	.023	.077	.023	.145	.022	.082	.016	.073	.023	.088
9—10	.073	.100	.022	.050	.016	.089	.060	.111	.006	.065	.022	.061
10—11	.061	.172	.033	.073	.011	.071	.017	.093	.011	.082	.016	.065
11—12	.044	.173	.022	.093	.016	.092	.060	.120	.039	.071	.023	.095
12—13	.045	.111	.017	.089	.015	.095	.014	.118	.040	.072	.022	.083
13—14	.070	.244	.028	.111	.012	.082	.009	.133	.027	.050	.022	.077
14—15	.044	.170	.034	.094	.018	.073	.000	.084	.022	.089	.017	.094
15—16	.033	.023	.024	.083	.011	.100	.006	.140	.016	.101	.044	.084
16—17	.033	.094	.023	.098	.022	.130	.022	.088	.016	.150	.033	.110
17—18	.039	.136	.016	.111	.014	.066	.000	.080	.027	.065	.016	.095
18—19	.045	.135	.023	.145	.023	.055	.011	.135	.040	.067	.019	.100
19—20	.056	.105	.018	.106	.018	.065	.028	.180	.040	.122	.034	.104
20—21	.055	.104	.011	.105	.013	.056	.023	200	.011	.068	.033	.083
21—22	.044	.089	.025	.130	.017	.100	.033	.060	.011	.072	.028	.100
22—23	.035	.094	.011	.104	.019	.112	.011	.068	.022	.090	.040	.111
23—24	.033	.084	.033	.072	.055	.100	.027	.072	.027	.105	.044	.105
24—25	.073	.089	.012	.061	.072	.094	.039	.061	.017	.094	.111	.133
25—26	.039	.083	.016	.103	.039	.112	.033	.089	.012	.100	.133	.134
26—27	.022	.111	.022	.073	.024	.072	.027	.083	.023	.122	.110	.111
27—28	.044	.106	.017	.112	.044	.094	.022	.130	.011	.089	.061	.077
28—29	.040	.084	.018	.094	.038	.073	.065	.132	.010	.078	.011	.073
29—30	.034	.072	.016	.106	.028	.056	.011	.133	.028	.124	....	....
30—31	.074	.095	.011	.114	.019	.050	.060	.120	.039	.110	....	....
31— 1			.012	.105			.060	.111	.028	.092	....	....

* The last four months have been added since the report to the meeting in Cleveland.

AMOUNTS OF AMMONIA GIVEN IN GRAMS IN 1000 M^3 OF AIR—OBSERVATIONS FROM 8 A. M. TO 8 P. M. (CONTINUED.)

DATE.	MARCH, '83.		APRIL, '83.		MAY, '83.		JUNE, '83.		JULY, '83.		AUGUST, '83.	
	Ammonia.		Ammonia.		Ammonia.		Ammonia.		Ammonia.		Ammonia.	
	Free.	Alb.	Free.	Alb.	Free.	Alb.	Free.	Alb.	Free.	Alb.	Free.	Alb.
1— 2	.010	.122	.022	.056	.005	.060	.032	.060	.011	.035	.032	.052
2— 3	.006	.083	.038	.067	.002	.050	.045	.068	.011	.040	.020	.055
3— 4	.022	.133	.017	.050	.002	.055	.040	.078	.026	.045	.021	.050
4— 5	.023	.100	.023	.083	.004	.078	.022	.050	.038	.067	.020	.050
5— 6	.016	.105	.006	.066	.004	.044	.023	.045	032	.033	.016	.044
6— 7	.028	.084	.016	.080	.003	.045	.027	.055	.033	.041	.026	.040
7—	.022	.112	.028	.084	.002	.061	.021	.050	.030	.042	.021	.065
8— 9	.021	.044	.023	.060	.017	.053	.017	.054	.032	.070	.018	.062
9—10	.045	.122	.021	.065	.011	.044	.020	.093	.021	.039	.040	.060
10—11	.011	.065	.018	.061	.020	.055	.016	.070	.022	.055	.030	030
11—12	.011	.044	.022	.055	.007	.056	.017	.100	.020	.045	.024	.060
12—13	.005	.050	.017	.072	.011	.050	.016	.072	.032	.061	.011	.065
13—14	.000	.044	.033	.061	.033	.050	.020	.061	.032	.052	.012	.050
14—15	.000	.054	.040	.061	.014	.056	.018	.080	.030	.060	.011	.046
15—16	.027	.066	.017	.044	.028	.051	.011	.066	.021	.054	.012	.053
16—17	.033	.078	.011	.050	.013	.033	.026	.065	.017	.045	.021	.058
17—18	.028	.065	.011	.045	.033	.039	.022	.066	.016	.055	.020	.067
18—19	.011	.072	.011	.050	.024	.050	.022	.060	.022	.050	.015	055
19—20	.011	.077	.006	.044	.022	.044	.021	.050	.011	.045	.026	.059
20—21	.009	.067	.006	.045	.028	.050	.034	.040	.016	.054	.015	052
21—22	.033	.066	.000	.065	.022	.056	.026	.055	.011	.039	.010	.051
22—23	.027	.055	.005	.050	.011	.061	.027	.050	.022	.038	.024	.110
23—24	.006	.056	.006	.050	.027	.045	.045	.068	.006	.055	.025	.081
24—25	.039	.088	.011	.066	.034	.055	.040	.061	.017	.056	.026	.049
25—26	.016	.050	.011	.061	.038	.062	.032	.056	.009	070	.030	.062
26—27	.017	.044	.011	.065	.033	.054	.023	.050	.011	.068	.015	.060
27—28	.022	.110	.017	.066	.040	.068	.027	.070	.016	.044	.026	.052
28—29	.011	.045	.005	.045	.032	.062	.011	.045	.025	.035	.019	.047
29—30	.017	.045	.007	.062	.029	.060	.026	.050	.033	.062	.018	.041
30—31	.027	.067	.008	.044	.026	.044	.016	.039	.020	.041	.017	.042
31— 1	.028	.056	....	....	.035	.039	....	....	.026	.047	.016	.050

These tabulated details giving the results of most careful daily examination of the atmosphere during an entire year in the same locality, and by uniform processes, develope several facts of value. First, they show that both free and albuminoid ammonia are constant elements of the atmosphere, at least in cities or densely populated localities, their presence in quantity capable of measurement having been found every day in the year. Second, that the free ammonia is much less in quantity than the albuminoid, and that they do not bear any uniform ratio to each other. Both vary much in brief periods of time, the quantity of free ammonia exhibiting these variations in a much greater degree than the albuminoid. Third, that the presence of decomposing animal matter directly increases the quantity of both varities of ammonia. When the decomposing material is moist, the increase of the free ammonia is greatest, and when dry the amount of free ammonia may be so small as to impart but little odor, and yet the albuminoid be greatly increased. The details mentioned by Prof. Long also show that the ammonial constituents of the air can be markedly increased at considerable distances from their source by atmospheric currents, as shown by the effects of the winds from the direction of Bridgeport, the principal packing and manufacturing establishments of which, are from two to four miles from the college laboratory where the observations were made.

Before making further application of these tables, we will give a similar tabular statement of the indications of ozone or active oxidizing agents in the atmosphere at the several stations selected for observation, as follows:

OZONE REPORT FOR THE YEAR 1882.

Scale of Coloration from 1 to 10 indicated by figures; blank, = no indication; x, = no observation; D, = day; N, = night.

JANUARY.

Day of Month.	Boston.		New York.		Pittsburg.		Baltimore.		Cincinnati.		Mayport, Fla.		Denver.		San Francisco.		St. Paul.		Chicago.		Evanston.		Lansing.		Day of Month.
	Thal.		Thal.		Thal.		Thal.		Thal.		Thal.		Thal.		Thal.		Thal.		Thal.		Thal.		Thal.		
	D.	N.	D.	N.	D.	N.	D.	N.	D.	N.	D.	N.	D.	N.	N.	D.	N.	D.	D.	N.	D.	N.	D.	N.	
1													1	1											1
2													1									2			2
3													1								1				3
4							1						1							4	2				4
5													1						3			1			5
6													1												6
7																						4			7
8													1								2				8
9													1									1			9
10													1	1											10
11													1								2	1			11
12																					2				12
13																									13
14													1								1	2			14
15													1								1				15
16													1								2	1			16
17													1								2				17
18																				1					18
19																									19
20													1								2				20
21													1								1				21
22																					3				22
23													1												23
24													1								1				24
25													1												25
26													1								2				26
27													1								1	2			27
28													1									2			28
29																									29
30													1								2				30
31													1								1				31

OZONE REPORT FOR THE YEAR 1882.

Scale of Coloration from 1 to 10 indicated by figures; blank, = no indication; x = no observation; D, = day; N, = night.

FEBRUARY.

Day of Month.	Boston.		New York.		Pittsburgh.		Baltimore.		Cincinnati.		Mayport, Fla.		Denver.		San Francisco.		St. Paul.		Chicago.		Evanston		Lansing.		Day of Month.
	Thal.		Thal.		Thal.		Thal.		Thal.		Thal.		Thal.		Thal.		Thal.		Thal.		Thal.		Thal.		
	D.	N.	D.	N.	D.	N.	D.	N.	D.	N.	D.	N.	D.	N.	D.	N.	D.	N.	D.	N.	D.	N.	D.	N.	
1											1	1	1			1	1				x				1
2											1	1	1			1	1								2
3											1	1	1		1										3
4											1	1			2										4
5											1	1	1				1								5
6											1	1	1												6
7											1	1	1												7
8											1	1	1	1	1	1									8
9											1	1	1				1								9
10											1	1	1		1	1									10
11											2	1	1		1										11
12											1	1	1			1	x								12
13											1	1	1		1										13
14											1	1	1									x			14
15											1	2	1				1								15
16											1	1	1		1	1	1		3	4					16
17											1	1	1						5	3	2				17
18											1	1	2			1							1		18
19											1	1	2		2	1	1			4			1	1	19
20											1		3			2	1		4				1		20
21											1		3			1							1	5	21
22												1	4	1	1								5	5	22
23											1	1	5	2									4	3	23
24											1	1	3	1									3	3	24
25											1		2		2	1							3	4	25
26											1	1	1		2	1							2	2	26
27											1		2			1					1		2	5	27
28											1	1	1		2	1								3	28

OZONE REPORT FOR THE YEAR 1882.

Scale of Coloration from 1 to 10 indicated by figures; blank. = no indication; x, = no observation; D, = day; N, = night.

MARCH.

Day of Month.	Boston.		New York.		Pittsburgh.		Baltimore.		Cincinnati.		Mayport, Fla.		Denver.		San Francisco.		St. Paul.		Chicago.		Evanston.		Lansing.		Day of Month.
	Thal.		Thal.		Thal.		Thal.		Thal.		Thal.		Thal.		Thal.		Thal.		Thal.		Thal.		Thal.		
	D.	N.	D.	N.	D.	N.	D.	N.	D.	N.	D.	N.	D.	N.	D.	N.	D.	N.	D.	N.	D.	N.	D.	N.	
1											1		2	1	x	x							1	3	1
2											1		1	1									2	5	2
3													2	1			9			3			4	1	3
4													2	2			9		6	3			1	3	4
5											1		2	2			4	x					1	4	5
6											1	1	2	1			3	3		2			3	4	6
7												1	2	2			6	5	3	5			2	1	7
8													1	1			9	7	4	5			2		8
9													1	2			4		4					1	9
10												1	1	1									3	3	10
11											1	1	1	1			8						3	1	11
12												1	1	1			4	3		2			3	4	12
13													x	1			2						3	3	13
14	1	1											1	1			3	9					3	2	14
15												2	1	1			5	8						2	15
16											1		1	1			9			5		5	1	1	16
17		1										1	1	1			9	5	2				2		17
18											1		1	1										4	18
19											1		1	1			9		3	4	3	3	3		19
20													1	1			9	6						1	20
21											1		1	1			9						3	5	21
22		1											1	1				3					4	3	22
23											1	1	1	1					2				4	4	23
24												1	1	1			9						2	3	24
25											1	1	1	1			9	8				3		4	25
26											1		1	1			8	7			3	3	1	6	26
27	1	1									1	1	1	1			3	2		4	3	3	3	4	27
28													1	2							2	2		2	28
29													1	1			5						3	5	29
30											1	1	1	1			3	7		2		2	4	3	30
31	1										1	1		1				6			3	4		3	31

OZONE REPORT FOR THE YEAR 1882.

Scale of Coloration from 1 to 10 indicated by figures; blank, = no indication; x, = no observation; D, = day: N, = night.

APRIL.

Day of month.	Boston.		New York.		Pittsburgh.		Baltimore.		Mayport, Fla.		Cincinnati.		Denver.		San Francisco.		St. Paul.		Chicago.		Evanston.		Lansing.		Day of month.
	Thal.		Thal.		Thal.		Thal.		Thal.		Thal.		Thal.		Thal.		Thal.		Thal.		Thal.		Thal.		
	D.	N.	D.	N.	D.	N.	D.	N.	D.	N.	D.	N.	D.	N.	D.	N.	D.	N.	D.	N.	D.	N.	D.	N.	
1	3								1	1			1	1					3	3	6	3	4		1
2													1	1							5	3	4	6	2
3									1	2			1	1							2	3	1	4	3
4					x				1	2			2	2					1	3	2	2	4	1	4
5									1				1	1					1		1				5
6													6	2			5	1		1	3	1		4	6
7													6	6							3	2	3		7
8													3	2					7	3	2	3			8
9									1				1	3							2	5	2	2	9
10									1				1	1					3	7	4	4		3	10
11													3	3					6	5	1	1	3	x	11
12										1			3	1					3	3	1	0	3	3	12
13									1	1			1	4					5	4	3	4	3	3	13
14									1				1	1					4		3		3		14
15										1			1	1							3		3	3	15
16									1	4			1	1								1	3	4	16
17									1	6			1								3		4	3	17
18									4				1								5	6	3	2	18
19													1	1							1	1	3	5	19
20									2				1						2	1		4	4	4	20
21										1			1	1					6	7	5	1	2	1	21
22									1	4			2	1					4	7	7	2		3	22
23									2	1			2	4					4	6	4	5		1	23
24									5	6			1	4					5	6	3	5		1	24
25									5	2			2	3					6	4	3	5	1	1	25
26									2				2	2					1		3				26
27									1				2	1							3	2	x	5	27
28									5				1	1							x	x	3	3	28
29									4				1	1						3	x	x	3	2	29
30									1				1								x	x	3	x	30

OZONE REPORT FOR THE YEAR 1882.

Scale of Coloration from 1 to 10 indicated by figures; blank, = no indication; x, = no observation; D, = day; N, = night.

MAY.

Day of Month.	Boston.		New York.		Pittsburgh.		Baltimore.		Cincinnati.		Mayport, Fla.		Denver.		San Francisco. x		St. Paul.		Chicago.		Evanston.		Lansing.		Day of Month.
	Thal.		Thal.		Thal.		Thal.		Thal.		Thal.		Thal.		Thal.		Thal.		Thal.		Thal.		Thal.		
	D.	N.	D.	N.	D.	N.	D.	N.	D.	N.	D.	N.	D.	N.	D.	N.	D.	N.	D.	N.	D.	N.	D.	N.	
1											1		4	2							1	5	4	4	1
2											1		2							1	4		3	1	2
3											1		1								2	5	2	3	3
4											2		1							4	6	2		2	4
5											1	1	1						7	7		1			5
6													2	1					4	5					6
7											1		2	1			3		3	1	4	5	2	3	7
8													4				4	5	1		5	4		1	8
9													4								2		1		9
10											1								1	4				2	10
11											2								5	4					11
12											3	3						2	6	5	2	4		1	12
13											3								4	4	3	1		1	13
14											2								6	7			3	3	14
15																			6	2				1	15
16											1	3							4	1		1	2	3	16
17											1	4	1								2	1	3		17
18											2	6	1								4	1	1	3	18
19											5	4									1		3	4	19
20											3	2									6	5	1	2	20
21											3	3	2						1		4	7	3	3	21
22											2										2	4	2	2	22
23												2	2								2	1	3	2	23
24											1	1	2						1	1			1	1	24
25											3	1	2						4	1	1	5	3	2	25
26											4	2	3	1					1	5	5	3	3	2	26
27	1										3	1	5	1					5	5	2	4		1	27
28											1		7	2					4	4	1	3			28
29													5	2					4	1			3	3	29
30	2												4	2							5	3	3	2	30
31													4	3							4	2	4	4	31

OZONE REPORT FOR THE YEAR 1882.

Scale of Coloration from 1 to 10 indicated by figures; blank, = no indication; x = no observation; D, = day; N, = night.

JUNE.

Day of Month.	Boston.		New York.		Pittsburgh.		Baltimore.		Cincinnati.		Mayport, Fla.		Denver.		San Francisco.		St. Paul.		Chicago.		Evanston.		Lansing.		Day of Month.
	Thal.		Thal.		Thal.		Thal.		Thal.		Thal.		Thal.		Thal.		Thal.		Thal.		Thal.		Thal.		
	D.	N.	D.	N.	D.	N.	D.	N.	D.	N.	D.	N.	D.	N.	D.	N.	D.	N.	D.	N.	D.	N.	D.	N.	
1													3	1	x	x							4	3	1
2			1										3	2								1	2	1	2
3			1	1									4	3										1	3
4			1	1									4	2											4
5			1	1								1	4								1		4	2	5
6			1								2		5	2									3	4	6
7				1									3	2									x	4	7
8				1							1	1	3								1		3	3	8
9													4	3					5		2	1	3	4	9
10											1		3	2					5	7	3	2	2	1	10
11													4	6					4	3	2	1			11
12													6	2					4	3	2	2	1		12
13												3	5	2							3			3	13
14													5	2								1	2	4	14
15													6	2									4	1	15
16				1									6	2								1	3	3	16
17													5	2							2	1	3		17
18													4	1					3			4	2	3	18
19													4	1					4	3	1		2		19
20				1									5	1					3		1		2		20
21													6	2									1	3	21
22													4	1						4			1	3	22
23													4	3									1	2	23
24													5	1						2			3	1	24
25				1									5	2									3	3	25
26												1	6	1									3		26
27			1										5	2					x				1		27
28			1	1									6	3					x						28
29			1								1		5	2					3		1	1	1	2	29
30											2		4	2							3	2	1	3	30

OZONE REPORT FOR THE YEAR 1882.

Scale of Coloration from 1 to 10 indicated by figures; blank, = no indication; x, = *no observation;* D, = *day;* N, = *night.*

JULY.

Day of Month.	Boston.		New York.		Pittsburgh.		Baltimore.		Cincinnati.		Mayport, Fla.		Denver.		San Francisco.		St. Paul.		Chicago.		Evanston.		Lansing.		Day of Month.
	Thal.		Thal.		Thal.		Thal.		Thal.		Thal.		Thal.		Thal.		Thal.		Thal.		Thal.		Thal.		
	D.	N.	D.	N.	D.	N.	D.	N.	D.	N.	D.	N.	D.	N.	D.	N.	D.	N.	D.	N.	D.	N.	D.	N.	
1													5	2			2				2	1	2	1	1
2													8	2						6	2	1	3	2	2
3											1		5	2						6	2				3
4													5	2					5	5	1				4
5													5	2									2		5
6											1	1	6	1									2	1	6
7													8	2			2						2	3	7
8													4	1					4		1				8
9													6	2								1	3	3	9
10												1	6	2									3	3	10
11												1	4	2									4	3	11
12													5	2				2			1	1	1	4	12
13													3	1			1						2	2	13
14													5	2					1				1		14
15													6	1								1	1	2	15
16											1		5	2								1	3	2	16
17													5	1							1	1	1	2	17
18													4	1							1		3	3	18
19													3	1				2			1		3	3	19
20													6	2									4	2	20
21													2				2		3			1	2	2	21
22													7	1			2						1	1	22
23													6	1			2				1		1	2	23
24													5	2									3	3	24
25													6	3							1		2	3	25
26													5	2							1	1	2	3	26
27													5	2				2		1	2		4	2	27
28												1	5	2							2	2	5	1	28
29													6	3				1			2	1		1	29
30													5	2						7	2	4			30
31													4	1							1				31

OZONE REPORT FOR THE YEAR 1882.

Scale of Coloration from 1 to 10 indicated by figures; blank. = no indication; x, = no observation; D, = day; N, = night.

AUGUST.

Day of Month.	Boston.		New York.		Pittsburgh.		Baltimore.		Cincinnati.		Mayport, Fla.		Denver.		San Francisco.		St. Paul.		Chicago.		Evanston.		Lansing.		Day of Month.
	Thal.		Thal.		Thal.		Thal.		Thal.		Thal.		Thal.		Thal.		Thal.		Thal.		Thal.		Thal.		
	D.	N.	D.	N.	D.	N.	D.	N.	D.	N.	D.	N.	D.	N.	D.	N.	D.	N.	D.	N.	D.	N.	D.	N.	
1													3	1						2	1		1	1	1
2													2				2		5	4	2	2			2
3													5	1			9			6	2	4	1	1	3
4			3	4							1		4	1					3		3			1	4
5				3									6	3						3	1		1	1	5
6													3								0	1	1	2	6
7													2								1		2	2	7
8			2										3	1								1		3	8
9			2	1							1		3	2							2		1	2	9
10			1										3	1								1	1	1	10
11				3									4	1			2						3	3	11
12													5	1							2		3		12
13													4										1	2	13
14			3										4	1									2	3	14
15			1	1									5	2							1	1	2	2	15
16													3	1							3	1	3	2	16
17			3										3	1							1	1	1		17
18			3										2								2	1	1	2	18
19			3	1									1									2	2		19
20													2	1							2		3	3	20
21			2										3	1							2	1	3	3	21
22			2										2	1							1		3	1	22
23			4	3									1							6	1		1		23
24			4	1									1						1		2	1			24
25			3	2									3								1	1	1		25
26			3	2									2	1							3	2	1	1	26
27													2	1						4	3	3	2	2	27
28			2										3	1					3		1	2	1		28
29			2	2									1								2	2	1		29
30			2										1	1							1		2		30
31			3										3	1								1		1	31

OZONE REPORT FOR THE YEAR 1882.

Scale of Coloration from 1 to 10 indicated by figures; blank, = no indication; x, = no observation; D, = day: N, = night.

SEPTEMBER.

Day of month.	Boston.		New York.		Pittsburgh.		Baltimore.		Cincinnati.		Mayport, Fla.		Denver.		San Francisco.		St. Paul.		Chicago.		Evanston.		Lansing.		Day of month.
	Thal.		Thal.		Thal.		Thal.		Thal.		Thal.		Thal.		Thal.		Thal.		Thal.		Thal.		Thal.		
	D.	N.	D.	N.	D.	N.	D.	N.	D.	N.	D.	N.	D.	N.	D.	N.	D.	N.	D.	N.	D.	N.	D.	N.	
1			4										3	2						3	1	2	x	x	1
2			6	1									4	1							1				2
3													2	1								1			3
4			1										5	2											4
5			3										4	2											5
6			2	3									3	1											6
7			2	3									4									2			7
8			2	1									3	2							2				8
9			2										3	3						5	2	1			9
10											1	1	5	2					3	6	3	3			10
11													3	1					0	1	2	1			11
12			2									1	4	2							2	3			12
13			2	2							1	1	2	1							1				13
14			2	2									4	1								1			14
15			4	4									3	2							1				15
16			3	4									4	1											16
17													4	2											17
18			2									1	3									2			18
19			1										4	1							1	1			19
20			3								1		3												20
21													8	2			2				2	3			21
22													4	2			2								22
23				2									4	1			2					1			23
24			1									1	3				2								24
25			2										5	2							2	2			25
26			3	2									3	1							2	2			26
27			2	4									4	1							1	2			27
28			4	3								1	3	1						x	2	4			28
29			2	5								1	2								1	3			29
30													5	2					4	1	3	2			30

OZONE REPORT FOR THE YEAR 1882.

Scale of Coloration from 1 to 10 indicated by figures; blank, = no indication; x, = *no observation;* D, = *day;* N, = *night.*

OCTOBER.

Day of Month.	Boston.		New York.		Pittsburgh.		Baltimore.		Cincinnati.		Mayport, Fla.		Denver.		San Francisco.		St. Paul.		Chicago.		Evanston.		Lansing.		Day of Month.
	Thal.		Thal.		Thal.		Thal.		Thal.		Thal.		Thal.		Thal.		Thal.		Thal.		Thal.		Thal.		
	D.	N.	D.	N.	D.	N.	D.	N.	D.	N.	D.	N.	D.	N.	D.	N.	D.	N.	D.	N.	D.	N.	D.		
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3											1	2	3						1		2				3
4			1									1	4										1		4
5			1									1	2								2		1		5
6				3							1	1	2								1			1	6
7			1									1	2								1	1	2	2	7
8												1	2								2	1	2	3	8
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28													1				2						2	2	28
29													1								2		3	2	29
30													3	2							2	2	1	2	30
31													2				2				1		3	1	31

OZONE REPORT FOR THE YEAR 1882.

Scale of Coloration from 1 to 10 indicated by figures; blank. = no indication; x, = no observation; D, = day; N, = night.

NOVEMBER.

Day of Month.	Boston.		New York.		Pittsburgh.		Baltimore.		Cincinnati.		Mayport, Fla.		Denver.		San Francisco.		St. Paul.		Chicago.		Evanston.		Lansing.		Day of Month.
	Thal.		Thal.		Thal.		Thal.		Thal.		Thal.		Thal.		Thal.		Thal.		Thal.		Thal.		Thal.		
	D.	N.	D.	N.	D.	N.	D.	N.	D.	N.	D.	N.	D.	N.	D.	N.	D.	N.	D	N.	D.	N.	D.	N.	
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28													2				2				2	3		1	28
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OZONE REPORT FOR THE YEAR 1882.

Scale of Coloration from 1 to 10 indicated by figures; blank, = no indication; x = no observation; D, = day; N, = night.

DECEMBER.

Day of Month.	Boston.		New York.		Pittsburgh.		Baltimore.		Cincinnati.		Mayport, Fla.		Denver.		San Francisco.		St. Paul.		Chicago.		Evanston.		Lansing.		Day of Month.
	Thal.		Thal.		Thal.		Thal.		Thal.		Thal.		Thal.		Thal.		Thal.		Thal.		Thal.		Thal.		
	D.	N.	D.	N.	D.	N.	D.	N.	D.	N.	D.	N.	D.	N.	D.	N.	D.	N.	D.	N.	D.	N.	D.	N.	
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28															4	4								2	28
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30															1								4	4	30
31															1								3	4	31

*Place of observation in San Francisco changed to German Hospital.

LEPROSY IN MINNESOTA, 1869-1883.

A Report to the State Board of Health of Minnesota.[1]

BY CH. GRŒNVOLD, M.D.,

Chairman of the Standing Committee of the Board on that Subject.

[1]Originally published in the *Journal of Cutaneous and Venereal Diseases*, vol. II. No. 1, 1884.

There has lately been written much about a center of leprosy in the Northwest, from where the disease is said to be spreading. It may be interesting to see how facts support this statement.

As early as in 1864, the condition of the lepers among the immigrants to the Northwest has been an object for the attention of medical men from their own country. In that year Dr. J. H. Holmboe, surgeon in charge of the Hospital for Lepers in Bergen, Norway, visited this country, to study the influence change of climate and other relations had on the development of the disease.

He found 12 cases, of which two had originated in this country, while one, who came here leprous, had got well. His impression was that their condition of health was better than it would have been if they had stayed in the old country.

In 1869–70 the settlements were again visited by a medical gentleman from the old country, the late Prof. William Bœck, of Christiania, Norway, well-known in medical literature for his writings on leprosy and syphilis. The result of his investigations in the Northwestern settlements may be read in "Nordiskt Medicinskt Archiv," Band iii., No. 1.

He found in the three States, Wisconsin, Iowa, and Minnesota, 18 cases of leprosy, all of which had come from those parts of the Norwegian Western seacoast where the disease is endemic.

Nine cases had the anæsthetic form, 3 the tubercular, while in 6 cases both forms were represented at the same time, or one superseding the other.

In regard to the time of the appearance of the disease, in 9 it commenced already in the old country, and of these, 5 had lepers in their family, while 4 did not know of any leprous relation.

In the other 9 cases the disease first commenced in this country. Of these 8 had lepers in their family, and the disease broke out respectively, 2½, 3, 3½, 5, 6, 8, 9½, and 10 years after their arrival. These 8 cases that were developed on American soil may depend upon heredity; or they may have been caused by contagion in the old country, the only place where it is possible that they could have met with other lepers; or the disease may have developed from a miasma in the old country. Either of the last two suppositions being right, the time of the incubation will for two of the cases be 9½ and 10 years. Prof. Bœck considers them all as depending upon heredity, in direct or lateral line. If he had any doubt, he says, in regard to propagation of the disease by heredity, these cases would have convinced him.

As an instance, here is one of the cases described in the above-named medical *Archiv*:

"S. S., 45 years old, came 14 years ago to America to the place where he now resides, and he was in every respect perfectly well. His father had died, about 50 years old, in the lepers' hospital at Bergen; his brother and sister died leprous in the old country, one and four years ago; his father's sister had also had the disease. S. continued to be in good health after his arrival in this country for nine and one-half years; four and one-half years ago he commenced feeling heavy and drowsy, and two years later, after a violent cold, tearing and fleeting pains announced themselves in hands and feet, and from there in the upper and lower extremities, and at the same time swelling set in in the same parts and in the face, and an eruption of red spots appeared. The pains were so violent that he was obliged to stay in bed from January to May, and when he was able to set out of bed his strength was gone, and he discovered that his sensation was much lessened along the peroneal side of the feet and legs, and on the ulnar side of hands and arms. Since that time he has always suffered from fleeting pains in the extremities, and feels heavy and drowsy. 'I will never have a day of health any more,' he says.

Sensation is at present very weak in hands and feet, as well on the outer as on the inner side, from the hands along the arms to the shoulders, and from the feet along the legs and thighs until the neighborhood of the hip. The muscles of the right hand, between the first and second finger and those of the fifth finger, are considerably wasted."

This patient left the old country in good health, and continued to be well for nine and one-half years after his arrival in this country, in a place where there were no lepers before, and where it is not known that he has had communication with any.

The last of the nine cases developed on American soil, did not know of any leprous relation, and may possibly be referred to contagion. The case is, in short, as described in the above-named *Archiv*: "B. I. is 39 years old; came to this country 14 years ago; has for 12 years suffered, and is yet suffering, from rheumatic pains in the extremities. Recently, after a day's hard work, she had, in the evening, a violent chill, and the next day there appeared spots on the arms, and successively on the lower extremities, chest, back, and face. These spots are distinctly morphea spots, in some places slightly elevated. In them there is either complete anæsthesia or very little sensation; outside of them the sensation is normal, except on the external side of the feet and legs. Her appearance is very good; she is fleshy, has good appetite, the bowels are a little constipated, menstrual flow scanty. She does not know of any leper in the family. She has once, six or seven years ago, been in the house of a leper. By others it is said that she for some time has taken care of a leper." Prof. Boeck has his doubts whether this person does not also belong to a leprous family, and the disease is then due to heredity.

The professor is of the opinion that the lepers here are better off as regards their disease than they would have been in the old country. "They have come away from the places where we see leprosy may originate spontaneously, and which certainly will favor

its development, when the disposition is there by heredity. They have settled on fertile lands, where they certainly have to work hard to make a living, but they, generally, never undergo hardships, as we, in Norway, understand the term. Here is no work that can be compared to the midwinter's fisheries in open sea off the Finmark coast, or the hardships suffered while tending the cattle on the high mountain plateaus, which causes so often bring out the latent leprosy."

Since Professor Boeck's visit in 1869-70, investigations have been continued in Minnesota regarding the occurrence and character of the disease in that State. At present six cases and their whereabouts are known, all immigrated from that part of Western Norway where the disease is endemic.

None of them are confined to bed, and most of them are able to perform their daily duties.

The following table will show some of the particulars of the cases:

		AGE.	HOW LONG LEPROUS.	HOW LONG IN THIS COUNTRY.	FORM OF DISEASE.	LEPROUS RELATIONS.
Case I....	Male.....	58 years..	18 years.....	27 years..	Anæsthetic.	Father, father's sister, brother, sister, cousin.
" II..	"	44 "	10 years.....	15 "	Do.	Probably a brother.
" III..	Female...	29 "	7 "	20 "	Tubercular.	Father, 2 brothers.
" IV...	Male.....	29 "	7 "	16 "	Do.	None. (?)
" V....	"	35 "	16 "	12 "	Anæsthetic.	None.
" VI..	"	67 "	Prodromata in the old country.....	17 "	Do.	"

[1]Case No. I. is described by Prof. Boeck—his No. 1—and is the one described above as S. S. It is the only case yet alive of those he saw in Minnesota. He has, since the Professor saw him, been tolerably well until of late years, when the disease has made a quicker advance.

It will be seen that two of them have the tubercular form, while four have the anæsthetic; in two of these, IV, VI, a little complicated with the tubercular.

Two of them, IV, V, had the disease already in the old country, but one of them did not suffer much from it before seven years after the arrival to this country.

Of the other four, three know of leprous relations, while one (III) denies that the disease has ever been in her family. She is from a district where there are many lepers, Balestrand, in Sogn. The main features of the case are:

Case III came to America when she was thirteen years old, in company with a sister of her mother, sixteen years ago, and has all the time since lived near the place she first went to. The first two years she lived with her aunt, but after confirmation she served as housemaid in the families of the neighborhood until she, seven years ago, discovered the first signs of the disease. After a severe illness, she says, caused by cold, the legs swelled, and some vesicles appeared, first on one, later on both ankles, followed by sores. At present, she exhibits the tubercular form of the disease, and presents a very repulsive appearance. The complexion is pale, or rather a dirty white, the skin of the face thickened and rough. Tubercles, some suppurating, and some torn by scratching, are seen over the eyes and on other places of the forehead, on the right nostril, and on the cheeks and chin; also on the ulnar side and back of both hands, where as well as on the outside and back of the feet, and lower part of the peroneal side of the legs there is some anæsthesia. The voice is hoarse and rough. The nose seems flattened on account of the alæ spreading out. The lobes of the ears and lips, especially the upper, are very much thickened and elongated. The eyebrows and eyelashes are gone; conjunctiva a dirty white, with a troublesome secretion; cornea somewhat opaque; her eyesight is very much impaired. She denies having any discoloration of the skin, any sores or tubercles in other places than those above named, and on the ankles, where there are deep ulcers, laying the bone bare. She does not suffer much, only once in a while she feels a little oppression and some slight pain in the chest and back, but this, she believes, is only caused by weakness. Appetite is irregular; the sleep is commonly good. Menses commenced being scanty when the disease broke out, and stopped soon. She feels worse spring and fall, but is seldom confined to bed. She takes cold easily. Like almost all lepers here, she ascribes her disease to cold. "She suffered so from cold," she explains, "in a place where she was working, that she, then and there, got the disease." It is not known by herself, or anybody else, that she ever met with a leper in this country.

She must have carried the germ of the disease with her from the old country, whether it has been communicated by contagion or miasma, if she is right in her statement that the disease has been neither in her father's nor mother's family. The disease became evident when she was 22 years old, and had lived in this country nine years. She will not remember any prodromes; has probably tried to conceal her condition as long as possible. She tries yet to put the best appearance to her miserable condition.

Ten lepers of the immigrants are known to have died in Minnesota since the settlement of the country, all of them males. Of these, seven have died in the last seven years, and the following table will show some of the particulars of the cases:

	AGE AT TIME OF DEATH.	HOW LONG LEPROUS.	HOW LONG IN AMERICA.	FORM OF THE DISEASE.	LEPROUS RELATIONS.
Case I.....	49 years.....	24 years.....	19 years.....	Anæsthetic	Brother of mother's father.
" II.....	56 "	14 "	24 "	Tubercular.....	A cousin.
" III.....	35 "	10 "	9 "	Anæsthetic	Father's brother.
" IV.....	About 30 years.....	3 "	13 "	Tubercular.....	Brother's father and bro. diseased.
" V.....	" 30 "	12 "	15 "	Do.	Do.
" VI.....	63 "	30 "	21 "	Tuberc. first seven years, afterwards anæsthetic; disease stopped before death.	Brother and father's brother.
" VII...	30 years.....	.....	10 "	.....	Mother's brother.

It will be seen that three of them had the anæsthetic form, and died 24, 10 and 30 years after they got the disease. The last case, No. VI., Boeck's observation 2, is an instance of one form changing into the other; the disease commenced in the tubercular form, and continued so for 7 years; after a violent fever it changed into the anæsthetic. Three had the tubercular form, and died after having had the disease 14, 3 and 12 years. Case II. got the disease 10 years after his arrival in this country, when he was 42 years old.

All of them had lepers in their family; three of them had the disease in the old country; three got it here—two, ten years, and one three years after their arrival.

Four of the lepers—two of them living yet—have full-grown children born in America; two have full-grown grand-children. One, No. VI. of last table—Boeck's observ. No. 2—has fifteen grand-children, aged from 2 to 22, and two great grand-children, and in none of them has any sign of the disease been discovered. The other, No. I. of the first table—Boeck observ. No. 1—who belongs to a family strongly infected with lepers—his father and father's sister, his brother and his sister were lepers—has full-grown children and many grand-children of an age up to 17, all in good health.

The suggestion of the above facts, as far as they go, seems to be that the disease is not so easily acquired here in the Northwest as in the old country, be it by heredity or contagion. The dry climate is, possibly, not so favorable for the development and the communication of the disease, that at present mostly belongs to the sea-coasts and islands. The chances of contagion are decidedly less here than in the old country; there is greater cleanliness, as a consequence of the greater economical prosperity, and the new-built houses of the first settlers in a new country furnish no filthy nests for contagion.

But, once acquired, the disease seems to run in regular course without abatement.

[1] Cases II and VI. were seen by Prof. Beock in 1870, and described by him in the above-named journal, as observations 3 and 2. Case II got steadily worse until death, 8 years after the professor saw him, but in No. VI. the disease made no advance years before his death, which occurred 30 years after he was attacked, 7 years after Prof. B. saw him, and described his case. He was, in the last years of his life, since Prof. Boeck's visit, in good health, with the exception of the anæsthesia in the already attacked places, and an always open and discharging ulcer under one foot When this discharge stopped, about 14 days before his death, vomiting set in, which became more and more distressing, so he could keep nothing in his stomach. He was not confined to bed, but moved about as usual, until just before death.

A CASE OF SUPPOSED MALIGNANT DISEASE OF THE UTERUS TREATED BY IODOFORM.

BY I. W. FISKE, M.D., KALAMAZOO, MICH.

[Read before the Kalamazoo Academy of Medicine, January 29, 1884.]

About three and a half years since I was called to see Mrs. H., who had been suffering for some time with some uterine trouble. She came here from Ionia, where she had had removed some time previous a portion of the external os uteri for supposed malignant disease. I found the uterus somewhat enlarged, with the inside roughened and uneven. She was suffering from considerable pain at this time. Some physician in Grand Rapids had applied pure nitric acid to the internal part of the organ. I applied iodized phenol to the inside and hot water injections, and also used electricity, passing the current through the pelvis, and also applying one pole to the os and the other to the lower part of the spine, and always with relief. After about two months' treatment the inside became smooth, pain was relieved, uterus was lessened in size, and she was enabled to return to her business, which was that of dress-making.

She continued in comparative good health for some months, when the pain again returned, and after some little time was obliged to give up work, and I was called again. I found the uterus very much enlarged and elongated; very hard, with an ichorous or fœtid discharge. In fact the organ felt hard like bone. The disease was confined wholly to the uterus. I again used the former treatment, with medicine to relieve pain. After treating her awhile with no apparent change, except that the uterus continued to enlarge so as to almost fill the lower pelvis, I prescribed suppositories of iodoform, hyoacysmus and conium—five grains of the former with two grains each of the latter These were to be applied direct to the uterus night and morning. My sus-

picions being aroused with the idea that I had to deal with malignant disease, I called Dr. H. O. Hitchcock in consultation. After a thorough examination of the case he confirmed my diagnosis, and advised the continuance of the treatment. Some little time after the doctor again saw the case with me. After a second examination his former opinion was only the more thoroughly confirmed. Dr. Osborne then saw the case (he having had a case of schirrhus some time previous) and he pronounced it an undoubted case of malignant disease. I continued to persevere with the iodoform treatment, and after about three months the uterus began to soften, became less painful, and after using the treatment about six months the uterus became normal in appearance, the patient entirely relieved of pain, and she was enabled to return to her work. One year ago last fall she returned to her home, and has been comparatively well ever since.

From the successful outcome of the case I was led to the conclusion that we were all mistaken as to the diagnosis. Some time last winter I received a paper from Dr. Cutter, of Boston, on the uses of iodoform, in which he gives the history of three cases of what he pronounced malignant disease of the uterus, but by the use of iodoform, topically applied, the disease had finally disappeared. He used gr. xv of the iodoform in each suppository. The patients had remained well up to the time of his article. He also added that if the patients had died there would have been no doubt but that the cause of death was malignant disease of the uterus.

I have thus given a brief history of the above case from recollection, as I kept no record of the case, simply to elicit any experience any of you may have had in the above treatment in such cases, and to ask the question: "What effect, if any, has iodoform upon malignant disease of the uterus?"

MEDICAL PROGRESS.

MEDICINE.

ZOÖGLEIC TUBERCULOSIS (A FORM OR SPECIES OF TUBERCULOSIS WITHOUT BACILLI.—Malassez and Vignol have published in the *Archives de Physiologie*, with illustrations, an article which gives the result of their investigations in the laboratory of histology in the College of France, which embrace the following conclusions:

1. There exist tubercular lesions which do not present bacilli, and which inoculated can give rise to tuberculoses equally without bacilli, and at the same time resembling bacillary tuberculoses. The same results obtain with their products of culture. If then the presence of bacilli is sufficient, according to Koch, to characterize the tuberculous nature of a lesion, the converse is not exact; or, in other words, their absence is not sufficient to negative the tuberculous nature of a lesion.

2. Among these tuberculoses of inoculation without bacilli, there are some which are characterized by the presence of zoögleic masses of micrococci, which, in the tissues which they infect, play the part of phlogogenic foreign bodies, and also produce there the so-called tuberculous lesions. These tuberculoses then should be designated by a special name—that, for example, of zoögleic.

3. There are also other tuberculoses of inoculation, non-bacillary, in which distinct zoögleiæ cannot be distinguished. They appear to be due to the same species of micrococci with those in the zoögleic masses; but, in lieu of being crowded into groups, they are disseminated in the tissue of granulation, and it is on account of this dissemination that, in the absence of a special coloring reagent, they are not sufficiently defined. As a proof of this, they can by inoculation engender the zoögleic tuberculoses.

4. These same non-bacillary tuberculoses, with or without distinct zoogleiæ, may produce after a varying number of generations of inocculation, bacillary tuberculoses; as if the zoögliæ, the micrococci diffused, and the bacilli were simply different forms, or states of development, of the same micro-organism. However, as this transformation of the zoögloeiæ into bacilli has not been directly observed, we have no right to declare them as of the same nature, whilst the hypothesis is a justifiable one.

5. Whilst these zoögleiæ and micrococci do not bear an exact resemblance to the parasites previously described by Klebs, Aufrecht, and Toussaint, it would seem as if there was a certain relation between them, but the facts observed do not decide the question.

EXPERIMENTS ON POISONING BY THE BACILLI OF THE MACERATION OF JEQUIRITY.—M. de Wecker having demonstrated the production of inflammation of the conjunctiva, as a means of curing rebellious ophthalmia by the use of this drug; and M. Sattler having determined that its active principle was due to the presence of a characteristic bacillus, MM. V. Cornil and A. Berlioz have conducted a series of experiments (*Archives de Physiologie*) on the mode of action of this substance when absorbed—through the lymphatics or by the blood. Their experiments were conducted on the guinea pig, rabbit, and frog, and are summarized as follows:

1. The action of the bacillus of jequirity when absorbed, and after having penetrated into the animal organism, varies according to the mode of its introduction, and the species of animal.

2. Whilst the local action of the microbes of jequirity on the conjunctival mucous membrane reacts but slightly on the general health, and gives therapeutic results in serious ophthalmia, their introduction into the lymph and blood produces general symptoms followed by death in the guinea pig, rabbit, frog, and fishes.

3. The subcutaneous injection into the cellular tissue of a cubic half-centimer of a weak infusion, produces an inflammatory œdema and lesions that are generally followed by death. If the dose be very small, the more or less extensive œdema terminates in a phlegmon and gangrene, and confers upon the inoculated animal an immunity against the subsequent injection of strong doses.

Injections into the peritonæum and pleuræ of rabbits of ¼ to ½ of a cubic centimer of the decoction of jequirity produced a peirtonitis and a fibrinous pleurisy, followed by death with general lesions. The living microbes were found in the sero-purulent exudation which characterizes these inflammations. These micro-organisms might penetrate into the blood and cause, through the obliteration of certain vascular territories of the liver, an infarctus with necrosis of the hepatic cells.

5. The injection of from two to three cubic centimeters of the decoction of jequirity into the veins of the ear of the rabbit is followed by death in a few hours. The bacilli of jequirity are eliminated through the stools and urine one or two hours after injection. The injection of two to three drops of the same decoction in the veins of the rabbit causes death in twenty-four hours.

6. In a general way the bacteria of jequirity live, reproduce themselves, and disseminate through the blood of cold-blooded animals (frogs, fishes) with an activity that is incompaiably greater than in the blood of the smaller mammalia. With the frog, let the dose be large (½ cubic centimeter) or small (2 drops), by its introduction into the dorsal lymphatic sac, or the peritonæum, death follows with a colossal quantity of living, moving bacilli in the blood, the lymph, and the serous cavities. While their number in the blood is comparable to that observed in charbon, there is also an elimination of the microbes by the urine. The capillaries of all the organs are more or less filled, but the cellules of the parenchymatous organs, the liver, kidney, glands; the proper elements of the connective, muscular, cartilaginous and other tissues, do not undergo any pathological modification, a fact which also increases the similarity of this infectious disease with that of acute charbon. It appears, like the charbon bacteria, to produce death by depriving the blood globules of their oxygen.

7. The blood of a frog so intoxicated has itself become septic. The subcutaneous inoculation of a portion of that blood produces a special septicæmic condition, with subcutaneous œdema, ecchymoses, etc., followed by death, which takes place in a few days. The lymph and blood are filled with bacilli, almost as numerous as when the maceration of jequirity is used; all the vessels are filled without producing thromboses. The secretions also contain bacilli which are eliminated in this way. The parenchymatous cellules are not generally altered in any marked degree.

Pulmonary Syphilis.—Professor de Renzi (de Naples) has an extended article on this subject in the *Revista Clinica e Terapeutica*, a translation of which is given in *La France Médicale*. He declares:

1. Syphilis of the lung may be hereditary or acquired. The last, which I have observed the most frequently, is not so rare as might be supposed. In a number of cases a diagnosis of phthisis pulmonalis has been made.

2. The development is favored by debility, acute catarrh of the respiratory passages, larynx, trachea or bronchi, and chronic catarrh of the same organs. These catarrhs may cause the pulmonary localization even in an apparently robust condition.

3. There are no special and characteristic phenomena. All the symptomatic and progressive peculiarities found in syphilis are also to be found in the pulmonary tuberculosis.

4. To distinguish between these two diseases we have the following symptoms:

(*a*) Absence of the tubercular bacilli in the sputa.

(*b*) Efficacy of the anti-syphilitic treatment, which produces a rapid relief, and even a cure, where syphilis is the cause. In the cases of failure of treatment the diagnosis is uncertain. This criterion remains doubtful with the iodine treatment, but with mercury a positive effect is rapidly produced.

(*c*) The existence of other syphilitic lesions, and particularly syphilitic ulcerations of the larynx.

(*d*) Syphilitic antecedents, dating from a remote period of five years or longer.

The last two arguments are less decisive than the first two, for a syphilitic is exposed to attacks of pulmonary tuberculosis.

5. Iodine and iodide of potassium act against pulmonary syphilis. Iodine may be given without fear in doubtful cases, for experiments made upon animals and clinical observations demonstrate that it retards, and, up to a certain point, prevents the development of tuberculosis. But mercury is more efficacious and deserves the preference.

SURGERY.

On Nerve-Stretching for the Relief or Cure of Pain.—Mr. John Marshall, as President of the Royal College of Surgeons, delivered the "Bradshawe" lecture on December 6, taking this subject for his theme (*Lancet*). He formalarized in a very satisfactory manner what is known to-day upon the subject. The first question is: Can a nerve be stretched? in reply, he demonstrated this stretching by the use of a 4 lb. weight, applied to a nerve and a piece of tendon by contrast; deciding the nerve to be not so extensible as an artery, but a little more extensible than a tendon. The nerves nearer the spinal cord are more extensible than those at a distance; the nerves of the upper limb than those of the lower; the longer the nerve the greater is its elasticity.

Secondly, the recoil of the nerve. According to one observer, a nerve stretched one-twenty-fourth of it length, recoiled to within one-fortieth of its original length.

How much weight will a nerve bear? The table of weights borne vary from six pounds for the supra-orbital to 288 pounds for the great sciatic. As a mean he considers 180 pounds to be the weight that the sciatic nerve will bear; recognizing the great difference between a dead and living nerve in this respect.

The effect of stretching upon the nerve structure. Illustrations given show the changing of the wavy

nerve lines to straight and paraliel ones, the epineural fibers, perineurium, and tubules are all stretched into straight lines, the fasciculi appear compressed, and the lymphatic spacè is obliterated. The natural regmentation seems to give way to an abnormal or irregular breaking up of the medullary sheath; sometimes the tubuli break, and still more rarely the axis-cylinder gives way. These anatomical changes are followed by degenerations; the sheath becomes infiltrated and hyperæmie, charged with little ecchymoses and larger hæmorrhages, degenerative changes are rapidly set up in the tubules themselves, the fine nerve tubule melts away, the axis-cylinder is broken across, the medullary matter escapes in the form of oil globules, and the whole mass of nerve becomes disintegrated, and subject to soft atrophic changes. Then restorative changes follow in the living nerve.

The physiological results of nerve-stretching are: To diminish motor properties and sensory functions, the latter more markedly, including not only that of common touch, but the sense of temperature, and the sense of pressure. Irritability is at first increased, then gradually diminishes and is finally extinguished; to gradually diminish reflex function.

Are the mechanical effects of nerve-pulling transmitted on to the spinal cord? Practically not,—the stretching effects pass to the sciatic plexus, to the roots of the nerves, where it must disturb the spinal ganglia on the posterior roots, and it must disturb the dura mater; hence it may disturb the cord a little through the ligamentum denticulatum on either side; but there is no change of tension in the intra-spinal or intra-meningeal part of the nerve, and no movement in the cord.

The therapeutic value of this procedure is shown in tables given of 252 cases of nerve-stretching in various diseases; a proper discussion of these tables gives certainly sufficient encouragement to the belief that nerve-stretching is not only available for the cure of *inveterate neuralgia*; but also for the amelioration of *tabes*. In cases of neuralgia a great proportion are due to irritation of the *nervi nervorum*, that is, fibres which come from the nerve itself to supply the epineurium and perineurium—this action of stretching paralyzes them. As to tabetic pains, here we have changes in the posterior roots and spinal cord, but it is a disease of the conductors, rather than of the receivers, of nervous impressions; the grey matter undergoes changes, but the white matter is more conspicuously affected. Now, while the nerve-stretching has been shown not go in its effects beyond the roots of the nerves in the sheaths of the dura mater, there it affects the ganglia, there it produces an excitation of the vasi-motor centers or trophic centers; and to the reaction that takes place and the changes induced in the nerve elements in consequence of that, we must look for the benefit obtained in cases of tabes dorsalis, or locomotor ataxy.

The operation consists in exposing the nerve, lifting it either with a hook or with the finger, and stretching it to a certain point. To what extent may we stretch? By translating the tabular conclusions in their application to *disease*, the conclusion is reached that no sciatic nerve should ever be stretched by a greater weight than between 30 and 40 pounds. By pulling upon a dynamometer, a very strong man, pulling with both hands, can only pull up to about 80, 90, or 100 pounds. But if you pull as you would pull a nerve, you will find that 30 pounds is about the limit of your pull.' Taking then the limit of 30 pounds for the sciatic nerve, of course this would be graduated downwards for smaller and smaller nerves. The fingers prove to be the only suitable instruments for stretching. Surgeons should educate their feeling of resistance, so as to be able safely and adequately to stretch a nerve, adequately in order to cure, safely so as not to injure the patient. The nerve yields sensibly to your traction; you feel an internal creeping movement in the particles of the nerve—of the sheath, no doubt; you feel a certain attrition and vibration going on; and you must educate yourselves to that and you will be safe.

As to the mode of pulling, and how long that pull should last, a continuous stretch of five minutes is considered as sufficient; stretch both ways for neuralgia. Stintzing says stretch downwards for tabes, upwards for neuralgia.

The cutting operation is not the only way of stretching nerves—in the case of the sciatic, by bending the thigh upon the body, so that the knee comes up to the chin, then straightening the leg upon the thigh and flexing the foot upon the leg so as to stretch the ankle joint also, the sciatic nerve, as proved on the dead body by Trombetta, can be stretched one inch. This mode has produced relief in four cases of tabes dorsalis. The use of Sayres' apparatus for suspending the body, and the consequent elongation of the body from an inch to two inches and a quarter, led Motschutkowski to experiment, finding the spine elongated to seven-eighths of an inch, although the membranes moved, he was not sure of more than a slight degree of tension on the posterior nerves. He applied this to fifteen cases of locomotor ataxy, for ten minutes at a time three times a week, succeeding in thirteen cases in relieving the pains and abnormal sensations.

The dangers are comparatively few. There are undoubtedly three or four cases where the death may be attributed to disease of the spinal cord, set up by nerve-stretching.

THE first number of the *Archives of Pediatrics* has appeared, and presents a very creditable make up. It is well printed, on good paper and in a very convenient form for reading. It contains two original articles, one by Dr. Wm. T. Plant, on Convulsions in Children, and one by Dr. D. C. Cocks, on Fifteen Cases of Tracheotomy; a clinical lecture by Dr. Louis Stair, on Chronic Gastro-Intestinal Catarrh in Children; clinical memoranda by Dr. Wm. P. Northrup, on a case of Expiratory Dyspnœa from Enlarged Bronchial Glands in a Case of General Tuberculosis and Empyema. The translations and abstracts are quite full and well selected. The editor is Dr. William Perry Watson, Jersey City, N. J.

THE

Journal of American Medical Association.

PUBLISHED WEEKLY.

The Editor of this Journal would be glad to receive any items of general interest in regard to local events, or matters that it is desirable to call to the attention of the profession. Letters written for publication or containing items of information, should be accompanied by the writer's full name and address, although not necessarily to be published. All communications in regard to editorial work should be addressed to the Editor.

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SATURDAY, FEBRUARY 16, 1884.

The New Medical Law of Virginia.—An act for regulating the practice of medicine in the State of Virginia has very recently passed both branches of the Legislature, received the approval of the Governor, and therefore become a law. A letter from one of the most eminent members of the profession in that State gives the more important features of the act as follows:

"Let it now suffice to state that it requires all applicants, including graduates of any and every medical school, to undergo an examination before a Licensing Board, which shall consist of men learned in medicine and surgery, and shall be appointed by the Governor from a list of names to be recommended by the Medical Society of Virginia. This Society is composed of the best elements of the profession in our State, zealous for the best interests of the profession, and completely independent of the medical schools in the State, whose graduates will be required to undergo the same examination as other applicants. This system has worked well in Alabama, where most of the rejected applicants have been graduates of legally established medical schools. I have always thought that whatever might be the influence of the example of a few exceptional schools, there could be no general reform until there was an entire divorce of the schools and the licensing authorities."

We congratulate our Virginia brethren on having a law for regulating the practice of medicine that does not nullify itself by recognizing a diploma from every institution called a medical college as sufficient evidence of fitness on the part of its possessor to practice medicine. There are three, and perhaps only three, legitimate objects to be accomplished by legislative enactments for regulating the education and practice of the medical profession. The first is, to define what shall constitute the minimum of attainments necessary to constitute an adequate medical education. This would necessarily include the general education needed to qualify one to enter upon the study of medicine, as well as the minimum length of time and opportunities required in the gaining of strictly medical knowledge. The second is the establishment and maintenance of an adequate State Board of Examiners, for thoroughly examining, both theoretically and practically, all applicants for admission to the practice of medicine. In other words, establish a competent tribunal to ascertain and enforce the standard of education required. The third should consist of a simple provision by which the certificates of similar boards in other States should be recognized, so as to maintain a comity of rights and interests between the States.

A New State Medical Society in New York.—We learn through a correspondent in Albany, N. Y., that at the annual meeting of the old Medical Society of the State of New York, the friends of the National Code of Ethics and of the maintenance of harmonious relations with the National Association and the social organizations of other States, were not numerous enough to reverse the action of the Society taken at the two preceding annual meetings.

They consequently withdrew in a body, and proceeded to organize a new State Medical Society, which is to hold its first regular annual meeting in New York City in November next. A new County Medical Association was organized in New York county two or three weeks since. The work of reorganizing thus begun will doubtless go on until the great mass of the profession in that State are again represented in the National Association, and are placed in harmony with the profession in the other States.

A National Pharmacopœia.—The bill introduced into the House of Representatives, at Washington, for framing and publishing a pharmacopœia of true national character, a copy of which was published in this journal for January 26, is making favorable progress in the Committee of Ways and Means, to which it was referred, and is strongly recommended by several of the more influential medical journals. We again ask that all our readers who approve the measure, shall lose no time in exerting their legitimate influence with members of Congress from their

respective districts in favor of the early passage of the bill. For other medical matters before Congress we refer to our correspondence from Washington, in another part of the JOURNAL.

A HINT.—Dr. Clevenger, of this city, suggests as a ready means of ascertaining the existence and location of small abrasions, needing a touch of the caustic before holding a post-mortem examination, the holding of the hands over strong aqua ammonia for a moment, when the smarting will quickly reveal all the sensitive or abraded places, however minute.

CORRECTIONS.—In the list of those who attended the meeting of the Association at Cleveland, as furnished by the Secretary and published in the last number of the first volume of the JOURNAL, the name of J. W. Hoff, M.D., of Pomeroy, Ohio, appears in the list of members by invitation. The Secretary informs us that it should have appeared as a delegate from the Meigs County Medical Society.

SOCIETY PROCEEDINGS.

The Chicago Medical Society held its semi-monthly meeting on the evening of February 4, 1884. After the usual routine of business had been transacted—election of new members, etc., Dr. S. V. Clevenger gave a report of a case of "Paretic Dementia in a Female," in which there existed peculiarities to justify us in giving a synopsis of it for publication:

Kate M., æt. 37; Irish; married, was admitted to the Cook County Insane Asylum April 12, 1883. Very intemperate before insanity was noticed by friends. October, 1881, furor appeared and lasted three weeks. She remained in St. Joseph's Hospital (this city) till mania abated, when a remission occurred, lasting till December 25, 1881, when (as her family state) she had "cramps" which lasted a week. She was then sent to Detroit, Michigan, State Retreat, where she remained until the latter part of July, 1882. Little was elicited concerning her last remission, except that she was errabund. The first remission, friends claim, was complete. Just prior to admission into the Cook County Asylum, delusions of persecution were observed. Exhibited marked paretic symptoms; tremulous oral and lingual muscles from the date of admission. Speech drawling, tremulous; feels extremely well satisfied; had unsystematized delusions of grandeur; gave little or no trouble till August 30, 1883, when hemiplegia followed a convulsion, and next day she died without having been roused from stupor. It was ascertained that her father had died of consumption of the bowels, and that her mother, at the age of 60, died paralyzed; also that this patient had never borne children, nor had she ever menstruated. Any hereditary predisposition denied. Necropsy eight hours after death. Uterus very small; resembling that of a child of sixteen; left ovary atrophied. Os tiucæ imperforate; vagina patulous and large; a third nipple well developed below left breast. The brain weighed 39 ounces after preparation in solutions for microscopical examination, hence weights as here given have a relative value only. (The author is skeptical as to any importance attaching to absolute brain weights, and of late years will often omit weighing until the tissue is hardened). Cerebellum weighed 4¾ ounces. Each hemisphere weighed within a few grains of 16⅜ ounces; the left side then can be considered under weight. Cholesterin abundant, especially in occipito-basilar regions. Right antero-posterior diameter of medulla slightly less than left. Isthmus weighed an ounce; vermis of cerebellum warped toward left side, causing left aspect of the organ to appear larger than that of the right. Cortex did not pull off with pia mater loose from medullary substance, as noted in some cases by Spitzka, but in many parts of parietal and occipital regions the pial adhesions were sufficient to bring away the outer layers of cortex, imparting the ragged, ulcerated appearance to which Rindfleisch called attention. Heterotopia found in anterior parietal region. Cortical pial adhesions occurred in the lowest extremity of right occipital lobe, with connective tissue proliferations filling widened sulci.

This condition was extreme at base of first frontal convolutions on both sides. Fibrous trabeculæ, clubbed and twisted, extended downward from pia mater, covering four to five square inches, filling interstices left by shrunken gyri and atrophied gray substance. In the white substance, external to the right lobulus cuneus, a cone-shaped area of yellow softening, with apex curved forward, was found, measuring one inch in length, tapering from three lines in diameter, It was apparently the colloidal necrobiosis of a thrombosed terminal branch of the posterior cerebral artery. The gelatinous contents of the cone were mixed with detritus of the degenerated blood-vessel. Sections microscopically examined afforded views of kinked and distorted vascular channels, often twisted glomerularly. Knobbed vessels were frequent, and perivascular spaces more so, some clear, others dotted with granular masses. Evidence of capillary stasis, general and decided, while dark bodies, resembling embryo connective tissue corpuscles, abounded. No well-defined Meynert "spider-shaped cells" were discovered. The ganglionic elements were shrunken and their processes illy defined. A few large nerve cells, with granule contents, were observed lying in clear spaces, as though contracted from areas they once filled. Sclerosed patches abounded in the sections examined. With the exception of the lesions in the bregmatic region, the post-Rolandic parts were mainly involved. The ventricular endyma was nodulated in parts, affording Spitzka's "ground glass" appearance. Comparatively few healthy ganglionic bodies were discerned in over a hundred sections taken from different parts of the cerebrum.

Remarks.—The frequency of paretic dementia occurring among women, as compared with its occur-

rence among men. We have investigated thirty-nine different authorities, and have calculated the average proportion to be about one to eight. This includes Kiernan's cases. Neumann[1], from not having seen a single case, denied the existence of paretic dementia among females. Sankey[2] inclines to the belief that sexual excess plays a part in the production of the disease, but the cases he cited show that there were, in addition to the sexual excesses, great vicissitudes.

Dickson[1] favors the views offered by some writers, viz.: the liability, etc., but considers emotional mental strain as the great cause.

Luys[2] says that in existing social conditions the males lead a much more active life than the females, and they are more subject to mental and emotional overstrain than females. Dr. Clevenger thinks the emotions preponderate in women, and even though carefully housed and cared for, every woman has to bear, at certain periods, considerable tension of feeling, more probably in proportion to her possession of other mental qualities which confer endurance.

Some authors state the affection among the rural classes is markedly less frequent in females than is the case among the civic population, and is much more frequent with the hand-to-mouth, the trading and speculative classes, where the wife (Kiernan) takes an active part in her husband's business, than among the classes where she is confined at home. There is a marked relationship between the menopause and paretic dementia, as some writers have stated. There is a mental disturbance at this period predisposing to the psychosis. The prevalent type is the quiet form, which may account for the infrequency of its observation, and it is rarely met with among the female Irish in the South of Ireland.

In the discussion, Dr. J. G. Kiernan stated that, even admitting females to be more emotional than males, as they are confined to their household duties, which are more monotonous than the male class of a speculative nature, the percentage of cases among them is one to every six or eight males. In France there is a middle class (the bourgeoisie) where a wife takes an active part in her husband's business, and paretic dementia occurs in them. Regarding the ætiology, so far as alcoholic excesses go, statistics are worthless. In 160 cases reported 116 were intemperate, but this is a symptom of the affection instead of a cause. In British Guiana, where the people indulge in excesses of a sexual nature as well as the alcoholic, and also where syphilis prevails to a considerable extent, the disease is unknown, although at Berbes, where the asylum is located in British Guiana, the superintendent reported one case, that of a male who came there from Europe, who was afflicted with the malady ere he came to Berbes.

Some French authors state that syphilis is not a predisposing cause, whilst Dr. Clevenger thinks paresis is very largely due to inherited or acquired syphilis.

Dr. R. Tilley thought if emotional strain had anything to do as a cause of this debility, that a Board of Trade speculator was much more apt to have it than a mechanic who gets his pay regularly, and yet, in the large portion constituting this category (the Board of Trade), we scarcely ever hear of their being subject to it.

Dr. Kiernan stated he had no doubt that this theory is true. The easy-going (Celts) class in Ireland do not have it, as may be illustrated by their not worrying as to how to prosper. In this city the emotional strain is great on those living from hand to mouth, and they furnish the largest proportion who have this trouble, while Jessen, a Scandinavian alienist, traced all cases to congenital or acquired syphilis.

This topic being concluded, Dr. Henry J. Reynolds read, by request, a paper on The Treatment of Urethral Strictures. (See this paper published in the JOURNAL of February 2, 1884, pp. 113 to 116, to which the reader is kindly referred). A number o the gentlemen participated in the discussion that fol lowed.

Dr. W. L. Axford was much interested in the remarks embodied in the paper just read, and said the author took the extreme views as those advanced by Dr. Otis, of New York, and that the advances in urethral surgery to-day are due principally to Otis. In strictures of large caliber, the best way to treat them is to cut them, as there is but little risk in doing so. In some cases of stricture of traumatic origin, this method is hardly admissible, and Symes' operation is then preferable — external perineal urethrotomy. The value of the acorn sound is more reliable to determine a stricture than that of the urethrometer; but to use the acorn instrument, the meatus may have to be incised. I want to ask the writer if he thinks in all cases of gleet there is stricture? Answered, yes. Then in all cases of stricture is there gleet? Answered, no.

Dr. C. E. Webster cited briefly a number of cases of stricture of large caliber he had seen operated upon. The first being one in the first stage of pneumonia, subsequently died of the lung trouble. The second case, that of organic disease of the heart, who died of the heart affection, and a third case operated on having Potts' Disease. None of these patients were benefited by the operation. The same surgeon, who is a teacher in a well-known school, operated for phymosis in a case of bow-leg, expecting thereby to relieve this deformity, as no other treatment for the bow-legs was recommended; then the following two questions were asked the reader of the paper:

First, whether he would operate upon a stricture of large caliber if no local symptoms were present? and secondly, whether acorn sounds of large size, which pass by dilating the urethra, may not indicate a stricture where the condition is not pathological, but simply due to a varying degre of elasticity along the tract of a healthy organ.

Dr. C. T. Fenn gave his experience as a physician (more than that of a surgeon) in introducing the finest sound, by reciting a case that not long since had been under his care. One of our well known surgeons also saw the case with him, in consultation, but in his essaying to pass the smallest steel sound,

[1] Lehrbuch der Psychiatrie, 1859.
[2] Lectures on Mental Disease.

[1] Medicine in Relation to Mind.
[2] Maladies Mentales.

had failed, and then resorted to aspiration of the bladder over the pubes. I had previously, however, introduced a filiform bougie, and the passage was effected by "passing it around" the stricture, as was determined at the autopsy, when the stricture was dissected, and found to be "fibrous," and in connection with it there was infiltration of urine, which caused death. The speaker did not agree with the author of the paper, in wanting to operate on so many of this class of cases, and thought the operation should be approached with no little amount of temerity, as the dark urethral channel could not be seen whilst operating upon it.

Dr. R. Tilley asked the reader why he thought it was necessary, in his cases, to render the urine alkaline before operating? and why this is better than the normal urine, which is but slightly acid? Normal urine, as he believes, is practically innocuous to wounds.

Dr. G. C. Paoli's experience and observation warranted his saying that only temporary benefit was derived from cutting operations, and that we should be very careful in making these incisions. Exudation takes place in two or three years, at longest. He has treated between 500 and 600 cases of stricture of the urethra by gradual dilatation. His patients were satisfied with this continual method, and all were successful, so far as he knew, without the cutting, and he believes we should attain the object by the method of gradual dilatation, and that it is far preferable. He then gave a history of a case which was operated on thirty-four years ago in Cincinnati. There was considerable hæmorrhage at the time. Temporary success followed, but in a short time the caliber of the canal became lessened and indurated. Every fortnight for a long period of time he passes a No. 8 or 9 Otis curve sound.

Dr. L. H. Montgomery thought stricture in the male a cause of sterility, and that the power of propagation was in many instances lessened by it, and inquired of any or all of the members what their ideas about this are? and also of the writer, how long he required a patient to take an alkali before the urine became alkaline? and if bicarb. of soda in 3ss doses is not superior to the citrate of potash to render urine alkaline?

Dr. D. W. Graham said that one of our eminent men in this city stated long ago he thought a previous attack of gonorrhœa would cause sterility in the male. The gentleman now having the floor opined that to cut a stricture is malpractice—and further than this, to cut what is revealed by an acorn sound he regarded also to be malpractice.

Dr. Reynolds, in closing, said he thought it was essentially necessary to dilute the urine, to do so, a patient will not void it so frequently, and in cystic irritation it should be rendered alkaline. In answer to Dr. Webster, he thought the condition to which he alluded would be extremely rare so far as relates to his second question, and regarding his first question, a patient would not know he had stricture unless local symptoms presented. For then a patient will consult us, and I probably should then advise an operation. Regarding one speaker's interrogatory about stricture being a cause of sterility, I think this is not the case, also that the bicarb. of soda or potash, given for two or three days, is equally as good as the citrate of potash to produce alkalinity of the urine.

The resignation of Dr. D. F. McPherson was accepted, on account of his removing to Buffalo, N. Y

The Society adjourned at a late hour.

L. H. M.

DOMESTIC CORRESPONDENCE.

FROM WASHINGTON.

The following bills of medical interest have been introduced in Congress:

January 7.—By Mr. Ellis, H. R., 2211. To construct, maintain, and support a floating ward or hospital in connection with the United States Marine Hospital at New Orleans. This bill appropriates $30,000 for this purpose, and is to be for the reception, treatment, and maintenance of all United States Marine Hospital patients, and of foreign sailors admitted thereto, suffering from contagious or infectious diseases. It is to be moored in the stream of the Mississippi River, to be properly isolated, and served by a suitable steam launch, purchased for the purpose out of the balance of the appropriation.

January 7.—By Mr. King, H. R., 2219. To investigate the origin and spread of charbon in animals. This bill appropriates $5,000, to be expended under the direction of the Commissioner of Agriculture.

On January 15, a resolution was introduced in the House by Mr. Green, of North Carolina, to authorize the Committee on Public Health to employ chemical and medical experts, and to make a thorough investigation into the adulterations of food, drink, and medicine, and report thereon. The resolution was referred to the Committee on Public Health.

We have already given on page 23, vol. 2, of this journal, the text of the bill now before Congress, to provide for suitable accommodations for the Medical Museum and Library of the Surgeon-General's Office, U. S. A., but the matter is of so much importance that we take the opportunity of referring to it again, by calling attention to Ex. Doc., No. 12, Senate, 48th Congress, 1st session, which is the official title to an illustrated pamphlet embodying the views of some of our prominent medical men, the resolutions of the American Medical Association, the reports of the Committee on Public Buildings and Grounds, and the detailed argument of the late Surgeon-General Barnes, setting forth the urgent necessity for the proper care of the Museum and Library. Three large-sized illustrations give the details of the proposed structure, which, if adopted, will be a handsome, commodious and convenient building. This is a public document, accessible to all, free of charge, through their members of Congress, and should receive wide circulation; as all who read it will be convinced of the importance of adding what political influence they may be able to exert in favor of the project. We say political influence, for though it

may be a distasteful expression to many medical men, it is the most comprehensive term to apply to the situation.

January 8.—Mr. Randall introduced a bill, H. R., 2697. To prepare and publish a National Pharmacopœia for the United States. It requires the detail, as soon as practicable, of two officers of the Marine Hospital Service, of two officers of the medical staff of the Army, and two officers of the medical staff of the Navy, for the duty of compiling and preparing a pharmacopœia, which shall be known as the "National Pharmacopœia of the United States of America," and shall be held and accepted as the standard for the purveying, compounding, and dispensing of drugs or medicinal agents, and shall be taken as authority in the Treasury Department on all questions arising under the tariff laws of the United States with regard to the nomenclature, description, and purity of drugs or remedial agents, and shall further be received as evidence in the United States courts. And the matters contained in the said pharmacopœia shall be free for use by all authors and commentators for the benefit of the medical and pharmaceutical professions and of the community at large; and it shall not be lawful for any one to reprint and publish the said pharmacopœia as a whole.

SEC. 2. That the medical officers detailed as above provided shall invite the American Medical Association and the American Pharmaceutical Association, at their next annual meetings, to form committees of not more than three members from each of the said associations, which committees, if so appointed, may coöperate with the above-named medical officers in the preparation of said pharmacopœia, forming a board which shall have power, from time to time, to add to its number as may, in its judgment, be necessary, and which shall elect a chairman and a secretary, and adopt such rules as it shall see fit for the expediting and perfecting of the said pharmacopœia. It also calls for an edition of not less than 5,000 copies, and appropriates $5,000 for the necessary expenses.

Section 4 declares that the pharmacopœia shall be revised once in ten years upon the plan embodied in this act.

Mr. Young introduced a bill (H. R. 2785), to prevent the introduction of infectious and contagious diseases into the United States, and to establish a National Board of Health. It amends and enlarges the provisions of an existing act in the relations of the Board to State and municipal boards of health, to vessels and their cargoes, to consular officers, requiring of them weekly sanitary reports to the Board. The Board is required in turn to make weekly reports embodying all such sanitary information as may be at their disposal, and to issue sanitary rules and regulations. The unexpended balance in the U. S. Treasury, $127,083.50, is made available for the purpose of carrying out the provisions of the several acts, to which is added the $100,000 appropriated for use in case of epidemic.

Jan. 9. Mr. Miller, of New York, introduced a bill, Senate, 982, for the maintenance and support of the Marine Hospital Service solely by the United States Government; and,

Jan. 15, Mr. Jones, of Florida, introduced a bill, Senate, 1105, to erect a building for a marine hospital at Pensacola, Florida, appropriating $75,000 for the erection of the building.

Jan. 11. Mr. Call, of Florida, introduced a bill, Senate, 1044, to establish a University of Medicine at the Capital of the United States, in the District of Columbia, for the advancement of science and the discovery of improved methods of treatment and cure of disease.

Section 1 appropriates $1,000,000 as a perpetual endowment.

Section 2 appropriates $100,000 for the erection of buildings and purchase of ground.

SEC. 3. Provides that the interest on the one million of dollars shall be annually paid for salaries of the professors and the expenses of the University.

SEC. 4. That the professors' chairs shall be open to all schools of medicine, and all methods of treatment and cure of disease.

SEC. 5. That the allopathic, homœopathic and eclectic schools of medicine shall all be represented in the professional chairs of said University, free and impartial opportunity to be afforded for proof of the value of each of such schools of medicine, and of methods of treatment, the end and purpose of this university being to apply the severest processes of reason and experiment to all alleged discoveries and remedial agencies for the cure of disease, etc.

SEC. 6. That the Board of Trustees shall decide what professorships shall be established; and whenever any system or method of cure of disease shall obtain any considerable hold on the public mind, it shall be the duty of the said Board of Trustees to allow the professors of such system to appear at this University and submit the same to scientific examination and practical experiment and proof.

SEC. 7. That suitable hospitals for the treatment of diseases according to the methods of all systems, and for experiment with all remedial agents, shall be established, etc. etc., and if the treatment or experiment is upon a person in good health, an accurate statement shall be made of the results, etc.

We should watch with considerable interest the development of this new University, particularly as regards the establishment of allopathy. The advocates of medical dogmas, and consequently the laity generally, have for a long time been applying this term of allopathy quite promiscuously. Here is an opportunity to determine who there are among medical men to whom this term can be applied. The provisions of the bill admit of no misunderstanding, and it is necessary for the proper organization of the University that there be such a school, and that it be represented, and of course, under such circumstances, it will have to be clearly defined. Ought not the representatives of the faith cure and of total abstinence from alcohol also to be explicitly provided for in the bill? They certainly have obtained considerable hold on the public mind. Where the patients are to come from, in view of the clearly expressed determination to experiment in the severest manner, is

another question, but probably that is of secondary importance.

Mr. Hale, of Maine, on January 22, introduced into Congress Senate bill 1,223, to the effect that all appointments to medical service under the government shall be made from graduates of legally chartered medical institutions, without discrimination in favor or against any school or theory of medical practice. That any violation of the foregoing section shall be punished in the same manner as prescribed for like offenses by the act entitled "An act to regulate and improve the civil service of the United States," January 16, 1883.

It is hard to see how such a bill, if passed, is going to be carried into effect. It takes away a privilege which was at one time claimed by the Examining Board of the Army and Navy Medical Corps, that of examining all candidates without reference to their diplomas, *i. e.*, to whether they were graduates of a medical college or not, and restricts them to graduates in medicine for the future. But to say that they shall not discriminate in favor or against any theory of medical practice, is simply nonsense. For what other purpose are they appointed?

NECROLOGY.

HARRIS, ELISHA, A.M., M.D., of New York, was born in Westminster, Vt., March 5, 1824; died of peritonitis, after four days illness, in Albany, New York, January 31, 1884. He was the son of a farmer, and attended in youth the schools of the neighborhood and assisted his father at farm work. When sufficiently advanced he taught school, and Woolworth, and after attending the usual course of lec- commenced the study of medicine with Dr. S. B. tures graduated M. D. at the College of Physicians and Surgeons of New York in 1849. His love of study and the facilities which the City of New York afforded, determined him to begin practice there. Shortly after this he was united in marriage to the only daughter of the Rev. Joseph B. Andrews. The union was a happy one, but his wife died without children in 1867. The doctor never married again. Dr. Harris early gave evidence of special aptitude for systematizing reports on public health questions. In 1855 he was appointed Superintendent and Physician-in-Chief of the Quarantine Hospital on Staten Island. So acceptably did he discharge his duties that in 1859 the building of the floating hospital, to be anchored below the Narrows, facing the open sea, was intrusted to him. Dr. Harris was a man of good physique, temperate habits, of an equable temper and suave manners, capable of a prodigious amount of labor. He was all his life an extensive reader of the best literature, and was as well informed upon State and sanitary medicine as any physician in America, or perhaps in the world. Dr. Harris enjoyed a wide correspondence for many years with the most distinguished sanitarians through Europe and the United States, and his opinions on sanitary matters were held in the highest esteem. On the breaking out of the war of the Rebellion, he, in conjunction with the Rev. Henry C. Bellows and others, organized the National Sanitary Commission, and for nearly five years gave his time to that humane work. The railway ambulance was his invention, and which proved of such inestimable service during the war. The Exposition Universal in Paris awarded him in 1867 a bronze medal in recognition of its value. A silver medal was also granted him for the same ambulance by the Société des Secours aux Blessés. This railway ambulance was adopted and has been used in the Prussian Army and in the Franco-Prussian war. Dr. Harris devised the system for a record of the deaths and burials of soldiers which became general in the army. His eminent ability as a statist, and familiarity with the work of the National Sanitary Commission, led to his being selected as chief editor of the "Sanitary Memoirs of the War," which were published in several volumes. At the close of the war he again turned his attention to the sanitary condition and needs of the city of New York. And as a voluntary work he supervised a sanitary survey of the city. The study was published by the Appletons, and proved of great value to the city of New York, as well as to all students of sanitary science. On the organization of New York Metropolitan Board of Health, in March, 1866, Dr. Harris was appointed to the position of Registrar of Records, which he filled with ability until 1870, when a change of administration led to his retirement. In 1873 he was appointed Registrar of Vital Statistics, which position, by a change of city politics, was taken from him in 1876. But although Dr. Harris was relieved of office he never gave up his enthusiastic devotion to sanitary and public health studies. One of the best investigations and most fruitful of immediate advantage to the poor in the city of New York, was his thorough tenement house survey in 1869. Bad as the tenement houses are now in that great metropolis, things were a hundred-fold worse before the facts were collected and tabulated, and their danger to the public health so graphically delineated and laid before the legislature and the city authorities. Dr. Harris was a prolific writer on sanitary and reformatory subjects. The extent of his labors and writings is a matter of wonder to those who knew him best. Among his works the following were regarded as worthy of mention: Four reports on "Quarantine Hospitals, Yellow Fever, and Cholera," "An Essay on Pestilential Diseases," "Ventilation of American Dwellings," "Reviews of the Sanitary Experiences of the Crimean Campaign," "A History of the Work and Purposes of the United States Sanitary Commission," "A Practical Manual on Infectious and Contagious Diseases in Camps, Hospitals, and Ships," "The Citizen's Report on the Sanitary Condition and Wants of New York," a volume that has passed through several editions; "The Criminality of Drunkenness," "Nine Reports on Reformatory and Penal Institutions," "Six Reports of the Bureau of Vital Statistics of New York," "Reports of Sanitary Superintendent of the Metropolitan District of New York," "Four Reports of the American Public Health Association," Chapters in the Medical and

Sanitary Memoirs of the War," "Report of the Sanitary Government and Vital Statistics of American Cities," "Vaccination and Small-pox, and the Lessons of Jenner," "Reports and Transactions of the State Board of Health," "Report on a Uniform System of Vital Statistics in the United States." Dr. Harris was also widely known for his philanthropy. He was for many years identified with the Prison Association for the care and reformation of discharged convicts; a member of the society for improving the domiciles and condition of the poor, and of various other benevolent societies. Dr. Harris was a member of the County and State Medical Societies, the New York Academy of Medicine, the Physicians' Mutual Aid Association, the Society for the Relief of Orphans and Widows of Medical Men, the Medical Journal Association, and the Public Health Association of New York. He became a member of the American Medical Association in 1853, and attended meetings in 1860, 1864, 1868, 1872, 1876, 1877, and 1880. A member of the International Centennial Medical Congress in Philadelphia in 1876. He was one of the chief originators of the American Public Health Association and its Secretary for a number of years, and its President in 1879. Ever since its organization he has worked zealously for its success, and to promote its influence and advance the science of sanitation through all the States. The National Board of Health was the natural outgrowth of this organization, and for which body he also worked zealously. For some years Dr. Harris has held the position of Secretary of the New York State Board of Health, a position he was eminently qualified to fill. He fell at his post of duty. Few men have devoted themselves more zealously to their chosen path of professional labor, or have followed it with greater ability and less selfishness than has this great champion of sanitary science—Elisha Harris.

J. M. T.

In Memory of the late Dr. Benjamin Tappan.—At a special meeting of the Jefferson County Medical Society held in Steubenville, Ohio, January 21, 1884, it having been announced that Dr. Benjamin Tappan, aged 71 years, died on the 17th inst., at his home in this city, the following testimonial was ordered to be spread upon the records of the society:

Resolved: That in the death of Dr. Benjamin Tappan, one of its founders in 1858, and for many years its President, the Jefferson County Medical Society has lost a distinguished physician and surgeon, a profound scholar, a clear and independent thinker and logical reasoner, who, during his most extensive and successful medical and surgical practice, did very much to advance medical education and elevate the standard of professional knowledge. Skillful, self-reliant, persevering, and always a student, he possessed the elements of professional success, and was remarkable for the charity with which he bestowed with devoted attention, his able services among the poor. His scholarly attainments were not confined to his profession and allied sciences, his range of scientific knowledge being very comprehensive and complete, ranking him among the most learned of the profession.

With brilliant intellect and great force of character, he was often a warm friend or a formidable opponent.

The society hereby tenders its warmest sympathy to his bereaved family in their great affliction, and directs that a copy of these proceedings be presented by the President of this society to the family of the deceased, and that the Secretary furnish copies of the same to the Journal of the American Medical Association and city papers for publication.

E. Pearce, M.D.,
A. M. Blackburn, M.D., } Com.
B. H. Fisher, M.D.

E. Pearce, M.D., President,
J. C. M. Floyd, M.D., Secretary.

MISCELLANEOUS.

NEW BOOKS.

Ashhurst, J. The International Encyclopædia of Surgery. In 6 vols., v. 4. New York: W. Wood & Co. 8vo., subs. $6.00.

Curtis, E. Manual of General Medicinal Technology, including prescription writing. New York: W. Wood & Co., Wood's Pocket Manuals. 234 pp. 7t. $1.

Delafield, Francis. Studies in Pathological Anatomy. Vol. 2, pt. 1, Broncho-Pneumonia. 8vo. 15 p. 12 photo's. New York: W. Wood & Co. $2.00.

Fletcher, Robert. Tattooing Among Civilized People. Washington, D. C.: Judd & Detweiler. 8vo. 27 pp. Paper. $4.

Kirby, K. O. Veterinary Medicine and Surgery in Diseases and Injuries of the Horse. New York: W. Wood & Co. (Wood's Lib. of Standard Medical Authors.) 8vo. 322 pp. subs. $1.25.

Medical Record, The. Visiting List and Physicians' Diary for 1884. Yew York: W. Wood & Co. For 30 patients a week, $1.25; for 60 patients a week, $1.50.

Parkes, Edmund A. Manual of Practical Hygiene. 6th ed New York: W. Wood & Co. vol. 2. 8v. (Wood's Lib. of Standard Medical Authors) Subs. $1.25.

Ringer, Sidney. Hand-Book of Therapeutics. Tenth edition. New York: W. Wood & Co. 8vo. $5.

Williams, W. The Principles and Practice of Veterinary Medicine. First American edition. New York: W. Wood & Co. 8vo. 589 pp. Illustrated. $5.

Official List of Changes in the Stations and Duties of Officers Serving in the Medical Department United States Army, from February 1, 1884, to February 8, 1884.

Barnett, Richards, Captain and Assistant Surgeon; granted leave of absence for six months on account of disability. (Par. 8, S. O. 13, A. G. O., Jan. 16, 1884).

Changes in the Medical Corps of the Navy for the Week Ending Feb. 7, 1884.

Surgeon W. K. VanReypen, from the U. S. S. Powhatan, to the Navy Department as Assistant to the Bureau of Medicine and Surgery, and acting Chief of that Bureau.

Surgeon A. A. Hoehling from special duty at Washington to the Powhatan.

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ORIGINAL ARTICLES.

ON THE IMPORTANCE OF TRACHELORRAPHY, WITH CASES AND REMARKS.

BY JOSEPH TABER JOHNSON, A.M., M.D., OF WASHINGTON, D. C.

Professor of Obstetrics and Gynæcology, Medical Department University of Georgetown, Gynæcologist to Providence Hospital, Fellow American Gynæcological Society, etc.

[Read before the Washington Obstetrical and Gynæcological Society, Jan. 13, 1884.]

I should not be bold enough to present a paper upon so hackneyed a subject as the treatment of laceration of the cervix uteri, were I less impressed with the importance of this lesion, and the necessity, in aggravated cases, of its cure by Emmet's operation.

From some quarters we hear distant murmurs of disapproval and opposition, and nearer home we learn that from the lack of evidence to the contrary, it is concluded that this operation, which has been heralded as one of the greatest improvements of the age, does positive harm, by making the last state of the patient worse than her first.

I trust I shall be able to impress the society with the truth and justice of the claims which have been put forth for the surgical treatment of cervical laceration, and of the error of those who oppose it.

Of the importance of trachelorraphy, we have the testimony of Marion Sims, given in the discussion which followed the reading of Emmet's second paper on this subject to the Medical Society of the city of New York, in Sept., 1874. Sims said: "I have performed this operation often enough to speak in positive terms of its value. The discussion must, of necessity, be one-sided. There can be no objection, no opposition to the operation; we must accept it as Dr. Emmet has given it to us, for it is perfect—perfect in its methods, and perfect in its results. Like all new operations, it is likely to be abused; but the time will soon arrive when it will assume its place in the foremost rank of useful improvements."

Dr. Fordyce Barker, when a paper of Dr. Walter B. Chase was being discussed, in June, 1878, said: "I think there can be no doubt that the first paper of Dr. Emmet upon laceration of the cervix, associated with the puerperal state, is one of the most important contributions which have been made to gynæcology;" and Thomas, in the 4th edition of his work, says: "even if its eminent author had done nothing else to lay his profession under obligation, Emmet's paper would indelibly write his name upon the records of gynæcology. No one contribution to this department which has been made during the last half century has exerted a more marked influence upon uterine pathology than this is now doing, and will do in the future. None will have more influence in abolishing useless and hurtful therapeutical measures." And in his 5th edition, p. 352, he speaks thus: "It is surely not too much to say of it, that it constitutes one of the most important contributions to gynæcology which has ever been made."

I make no mistake then, Mr. President, in my estimate of the importance of this subject, and am in good company when I urge, with some enthusiasm, the more frequent performance of trachelorraphy than, I believe, has heretofore been the practice of surgeons in our city.

The danger has been with this, as with other important innovations, that errors in diagnosis and judgment would occur and disrepute be brought upon a very valuable operation by its unwise, unskillful and too frequent repetition.

An English Gynæcologist is quoted by Dr. C. C, Lee in his paper on "the proper limits of Emmet's operation," as follows:

"American surgeons seemed to pass their time between dividing the cervix when nature had left it intact, and sedulously stitching up the fissures which parturition left upon its surface."

Foreign gynæcolgists often misrepresent and then oppose trachelorraphy. I have conversed with several of our best American gynæcologists who have lately visited Europe, and they all agree that in plastic gynæcological surgery the English are far behind Americans in skill, dexterity, convenient instruments, neatness and success.

In ovariotomy they excel us, or have produced better results, but whether their greater success is owing to climatic influences, environment or skill, may be an open question. Thomas attributes it to the former rather than the latter.

Savage, Tilt and Duncan, Howard of Baltimore says, are still practicing gynæcology with Ferguson's cylindrical speculum, and should be forgiven for not recognizing a condition, which they cannot see or appreciate through an instrument which, according to Emmet, should never be used, except as a safe means of applying harsh treatment to the cervix, at the same time protecting the vagina.

This, and similar remarks of Tilt and Savage have been quoted so frequently against Emmet's operation,

that I desire to read a few words from Howard's Report of the Section on Obstetrics and Gynæcology, Baltimore, Md., April, 1883, in which he replies to the following remarks of Mr. Savage in the Obst. Soc., of London, March 1, 1882.

"The American school profess to believe that every disease (none excluded) incidental to the uterus may be, and generally is, the direct consequence of a cervical laceration. The English school disbelieves this on good grounds." Howard says:

"To what class of persons do these eminent English gynæcologists address themselves? Were they to attempt to verify their bald affirmations by the writings of the acknowledged exponents of the American school, they would soon find that they had not even the cobweb texture of *truth* to rest upon. American gynæcologists do *not* slit the cervix up to the os internum to cure a so-called ulceration, due to a slight cervical fissure. They do *not* believe that every disease of the uterus is generally the direct consequence of a cervical laceration; and they certainly understand the importance of judicious medical and local treatment as well as the English or any other gynæcologists, anywhere to be found, as their works amply attest to all candid and earnest inquirers after truth. * * * But the ablest American gynæcologists well recognize the conditions and indications which render trachelorraphy judicious and proper."

In speaking of Tilt's injustice to Emmet and Sims, and his criticism upon their operations, Howard says: "This is easily accounted for, as Tilt habitually uses the cylindrical speculum of Ferguson, and thinks the habitual use of Sims' speculum in uterine surgery is like using a steam hammer to kill a fly."[1] I cannot help thinking, in concluding the subject, that trachelorraphy deserves to rank among the most important contributions that have ever been made to gynæcology, and that during the past eight years the true indications for its performance have been more accurately ascertained, and its real value more correctly determined. * * * Moreover, as epithelioma often arises from local irritations, and a lacerrated cervix is constantly exposed to friction during respiration and locomotion, it is reasonable to infer, as indeed American experience amply attests, that this dreadful malady not unfrequently finds its point of departure in a cervical laceration."

In January, 1878, at the State Medical Society's annual meeting, in Albany, Drs. Barker and Jacobi, in discussing this subject, thought the operation was performed too often, and that many cases of slight laceration would recover without the knife, by observing cleanliness and the use of repeated astringent applications. This is not denied, but both gentlemen admitted that many weeks and sometimes months of treatment were required to complete a cure, and that relapses were constantly liable to occur. In the severer cases, where the laceration is at all extensive, would it not be more rational to submit a patient to a radical operation, which in three weeks would accomplish that which confessedly takes them, by medical treatment, months of expensive local applications to bring to pass? Their patients are then liable to constant relapses, the probability of abortion, and all to the development of cancer.

Goodell says this is one of the safest and most universally successful operations in surgery, and lends the weight of his name and reputation to its more frequent performance.

Writers differ as to the percentage of cases of laceration of the cervix following delivery. Emmet places it at 33 per cent.; Mundé, 22; Pallen, 45. Goodell thinks one woman in every six who has children sustains this injury. The percentage of cases requiring operative aid is comparatively small. Many lacerations heal during the puerperal period, and a certain proportion give rise to no symptoms, and require no aid; but in those instances when symptoms *do arise which are not curable by rest, cleanliness, and astringents, I contend that trachelorraphy is the most rational mode of treatment*, and should be resorted to.

The effect which this operation has been supposed by a few obstetricians to have in preventing conception, and in causing delay, difficulty, and relaceration in succeeding labors, was discussed in a paper in the January, 1883, number of the *Obstetrical Journal*, by Dr. P. J. Murphy. His arguments, which appeared to me at the time erroneous, have been so completely refuted by statements to the contrary published in the same journal, and in many personal communications from prominent operators, that I only refer to the subject in passing, and will now proceed to the narration of the cases which form the basis of this paper.

Case 1. My first case was Mrs. F.; white; age 24; mother of one child, which was delivered stillborn with the forceps. She suffered for several weeks from an attack of pelvic inflammation, but seemed to recover, and resumed her usual avocations. She soon began to complain of pains in back and loins, and was greatly troubled by a profuse leucorrhœa, which, about the time of the monthly period, became offensive. Sexual appetite was abolished; intercourse was painful, and frequently followed by a discharge of blood. She was the victim of more than usually troublesome nervous symptoms. She had the same difficulty in walking, standing, lifting, and going up and down stairs, which women complain of who were formerly supposed to suffer from ulceration of the neck of the uterus. This condition of things went on for about two years. She would get better under treatment and rest, but upon resuming exercise and neglecting treatment she would soon become as bad as ever.

I was requested to see her by Dr. B. B. Adams, and upon examination, recognized a unilateral laceration of the cervix, extending up to its junction with vagina on the left side. I explained the nature of the case, and suggested Emmet's operation as a radical cure. The suggestion was at once accepted, and the time set for the operation. While visiting my office to undergo a preparatory treatment which was considered necessary, on account of some remaining tenderness in the cellular tissue, Dr. Mundé, who was at my house for a few days, examined her. He fully confirmed my diagnosis, and thought it a typical case

[1] Uterine Therapeutics, 4th ed., p 31.

for operation, and on April 12, 1882, I operated, with the assistance of Drs. Ashford, B. B. Adams and Mallan. Four silver wire sutures were inserted. The patient remained in bed ten days, suffering scarcely any pain. Her water was drawn four times daily for three days, after which time she was allowed to use a bed-pan. Antiseptic vaginal injections were used after each act of micturition. The sutures were removed on the ninth day, and perfect union found to have occurred. Recovery was uninterrupted, and the patient is to-day entirely relieved from all the disagreeable symptoms which had so constantly annoyed her for two years. Coition occurs without pain, and the sexual desire has returned stronger than ever. She has gained about 40 pounds of flesh, and walks down town to church and back home without fatigue.

Case No. 2 Mrs. P., a widow lady with one child about three years old, consulted me on account of profuse and offensive leucorrhœa, back-ache, sick headache, menorrhagia, many nervous symptoms, and an inability to walk. Said she had not walked three squares in two years. Upon examination, I found a double laceration of the cervix. The space between its separated edges was filled in with everted and prolapsed mucous membrane, constituting the ectropion described by Emmet. This mass bled easily when touched by the finger or the speculum. I treated her some months with varying success, never succeeding in getting a healthy surface, and always having a complete return of her symptoms soon after a suspension of the local applications. I finally proposed trachelorraphy, which was readily agreed to, and after another month spent in preparatory treatment, I operated, with the assistance of Drs. Kleinschmidt, Mallan, Rice and Sumner. I had been impressed with the importance and necessity of great care in the after-treatment of these cases. My first operation was looked after with all the zeal of a young mother caring for her first and only child. I gave the most minute directions about rest in bed, the water, bowels, diet, etc. In making my visit about noon on the third day, I found my second patient up and dressed, eating deviled crabs and drinking beer. She said, in reply to my expostulations, that "she felt perfectly well, and could not afford to fool her time away in bed."

This patient could not be controlled, and spent no more time in bed. But she promised if she felt any pain or trouble of any kind to do as I advised. I removed the sutures on the twelfth day, and found perfect union, except one stitch had cut out on one side, but the patient made a good recovery. She called on me several days after, in passing, to say that she had walked from her house to the capitol—more than a mile—and was that far on her way home, and was happy to state that she was less fatigued than a walk half around the square would have made her before the operation. Her other disagreeable symptoms had all disappeared.

Case 3. My third case was a lady whose age was about 30, mother of two children. This lady had about the same symptoms which I have detailed in cases 1 and 2. She had in addition a retroverted uterus, and a continuous pain upon the same side as the laceration, which I then thought proceeded from an inflamed ovary, but which I now think may have been caused by an uncured cellulitis. She had been a sufferer from bleeding piles for seven years. Many of her symptoms were attributed by herself and friends to this cause, and with kind assistance of Dr. Lincoln I operated upon the piles. After recovery, which was perfect, the left side pain continued as severe as ever.

I put her through a month of preparatory treatment, and then denuded the surfaces and sewed up the cervix, with the assistance of Dr. Mallen, who gave the ether, and Drs. Lamb and Mary Parsons, who were friends of the family.

The patient would not have a nurse, preferring to be cared for by her tender and affectionate mother, who was very willing and very anxious to do everything for the best, but was ignorant of the proper qualifications of a "trained nurse." The patient did well until the third day, when she exposed herself to cold, not wishing to disturb her mother. She was soon after seized with a chill, and the most severe case of pelvic peritonitis and cellulitis developed which I have ever known recover.

Drs. Lincoln and W. W. Johnston saw her with me, and they were both of the opinion that she would not live twelve hours. She was confined to her bed about four months, but finally made a good recovery. She was able before leaving the city to walk about town, attend church, and go shopping with much less fatigue than before the operation.

The uterus was still retroverted at the time of departure, but she suffered very little inconvenience from it.

Notwithstanding the pain and sickness following the operation the patient expressed herself as pleased with her present condition, and able to do more walking and exercise with less fatigue and pain than before.

Union was perfect along the surface of the wound notwithstanding the inflammatory condition of the neighboring tissues. There was no cervicitis or metritis. She menstruated regularly during her four months in bed, with no increase of pain. There was rather a sense of relief at the time of each period, caused, perhaps, by the relief of the congestion of the endometrium.

Case 4. Mrs. B., white, age 22, mother of three children and had had several miscarriages. I was requested to see her on account of uncontrollable hystero-epilepsy. I recognized a chronic inflammation of the ovaries, but while requested to remove the uterine appendages by patient, as well as physician, I diagnosed a deep cervical laceration on the left side, and thinking that might be the controlling cause of the nervous manifestations, I sent her to Providence Hospital, as a private patient, and there operated, with the assistance of Drs. Leach, Bayne, Mallan and Eliot.

Suffice it to say the convulsions continued and were the worst I ever saw. She tired out all the nurses in the hospital, and exhausted the resources of the house physician. Hypodermics would control her at first,

but finally only the most profound anæsthesia would allay the ovarian pain and convulsions. The operation was a failure in every respect. The stitches tore out. When I came to remove them they were hanging from one side of the cervix,

I think now if Battey's operation had been performed she would have been cured. She has led a wretched existence since she left the hospital, and may yet be operated on.

Case 5 was a charity patient in Providence Hospital. She had been in all the hospitals and dispensaries in the city where she could gain admittance, and had exhausted the patience of several corporation physicians. She had always been treated, she said, for menorrhagia, profuse and offensive leucorrhœa, enlargement and ulceration of the womb, and this had been going on for more than three years. She had the usual symptoms formerly attributed to these conditions to perfection. Upon examination, a large double laceration of the cervix was found to exist, with ectropion. She was treated locally for a month, put upon extra diet and tonics, at the end of which time trachelorraphy was performed. More tissues than usual had to be cut away. On the 9th day the sutures were removed, union was found perfect, and in twenty-one days from the day of the operation the patient was discharged cured. Here was what some would call a brilliant triumph of gynæcological surgery over medical gynæcology. By a safe, easy and successful operation she had been cured in three weeks, when three years of local applications had failed to accomplish much, if any, good. Her condition seemed to me to be rapidly approaching the appearance of epithelioma. The large, soft, easily bleeding, vegetating mass between the everted edges of the lacerated cervix might soon have become the local focus for the development of this form of disease.

Dr. Murphy, in his paper above referred to, says: "I fear I shall never arrive at that perfection where it will be given me to appreciate why a laceration of the cervix, by being repaired, will probably prevent cancer of the womb."

Goodell, Emmet, Mundé, Albert Smith, Howard and Wilson of Baltimore, Byford, Sutton, Thomas, Sims—all held the view that these unhealed cases of laceration of the cervix may, and frequently do, terminate in epithelioma.

I am treating a private patient now, who is about 30 years of age, in Providence Hospital, who has this form of cancer of the cervix. When she came to me for treatment, I thought the disease was entirely limited to this part of the uterus, and proposed to remove the entire organ by abdominal section. She readily assented, but Dr. Lincoln, who kindly saw her with me, thought he detected sufficient evidence of the disease in the neighboring tissues and glands to cause him to advise against the operation. A laceration of the cervix was very evident in this case. The patient knows of no other instance of cancer among her relations, and, upon the evidence of the writers just named, I believe the laceration to be the cause of her cancer; and I believe, also, if it had been cured by an operation soon after it occurred, she might not have had cancer, and could have lived twenty or perhaps forty years longer.

My next three cases were similar in many particulars, and I will, therefore, not tax your patience to give them separately. In one case, however, the mental depression was much greater than in the others, so that her family, with good reason, I thought, feared her mental faculties would give way. She became very sad and morose, and did and said many little things which indicated an unsound and unbalanced mind.

She, and the other two patients were annoyed by the symptoms which Emmet, Thomas, and other authors describe as following lacerations of the cervix. They all had ruptured perinæums, and I operated upon each of them at one sitting—that is, in each case I performed the double operation at one and the same time.

In the January, 1883, number of the *American Journal of Obstetrics* is published a discussion upon a paper of Dr. J. B. Hunter, one of the surgeons of the Woman's Hospital, which took place in the New York Obstetrical Society, upon the propriety of restoring the lacerated cervix and perinæum at one operation.

While some opposed it, other speakers favored the double operation, especially for poor women who could not afford the time or expense for two operations. One speaker objected on account of the time the patient would be compelled to remain under the influence of the anæsthetic.

I found, by having everything in readiness, needles all threaded, etc., that the longest time occupied in completing the double operation was 1 hour and 4 minutes. I have assisted in a perinæum operation which alone lasted longer than that, when no special effort was made to hasten matters.

In each of these three cases the patients made a perfectly satisfactory recovery, so that I feel quite encouraged to repeat the operation in similar cases. The two difficulties to contend with are, firstly, the feeling that we are working against time, leading in the direction of too much haste and imperfect work; and secondly, the inability to remove the sutures from the cervix until the perinæum has become sufficiently firm to admit of the use of a speculum without endangering its integrity. I did not attempt their removal until after the expiration of six weeks; but Dr. Charles Carroll Lee, also of the Woman's Hospital, writes me that he has taken them out successfully in three weeks. Dr. Hunter does the same successfully in four weeks. I see no reason why the silkworm gut sutures could not be left in six months or indefinitely. I intend to try them, and not take them out at all unless I am sure they are causing irritation. Skene, of Brooklyn, uses a prepared Chinese silk suture, which he does not take out at all in some cases. He was compelled to cut two unabsorbed sutures in one case of labor where the cervix was prevented from dilating by their presence.

This operator has introduced several innovations, which, while they have succeeded admirably in his experienced hands, I would not recommend less experienced men to imitate. He has operated upon

eight cases in his private office, without anæsthesia, and allowed his patients to ride home in the street cars, and permitted them to remain up, and even to walk out during convalescence.

In two of Dr. Mundé's cases, mentioned in his journal, he found upon the third day, when making his visit, that his patients had gone down town to attend to their business, they being shop girls in a dry goods store. They both made perfect recovery. While this is all possible, still the risk of the occurrence of cellulitis is so great with some, upon slight exposure, that careful after treatment and rest in bed should be insisted npon. Fatal results have followed this operation. Mundé reported a death not long ago from secondary hæmorrhage and another from cellulitis—the only deaths, by the way, which I happen to know of as the result of trachelorraphy.

Much stress is laid by Emmet, Mundé, Thomas, Baker of Boston, Goodell, Lee, and others upon the necessity of careful preparatory treatment. This is good advice so far as relates to uncured pelvic cellulitis, but so far as it relates to cervical catarrh, it has always appeared to me better *not* to delay to cure the catarrh before operating, but to cure it by operating. Cut away the tissues from which the glairy tenacious catarrhal secretion exudes, down to the healthy parts, and bring the denuded surfaces together by sutures, and you cure your patient and do away with the discharge at one and the same time. If the catarrh continues from the canal which you construct or restore by your operation, I hold that you have it in much more favorable condition for treatment than before.

In this connection I was pleased to see an article of Dr. Van de Warker in the July number of the *Journal of Obstetrics* for 1883, in which he makes this point in his analysis of thirty-one operations. The results produced by cervical laceration form, in a measure, the indications for its treatment, and I can state these indications in no more concise way than by giving the following quotation from Thomas, p. 358:

"Nothing more triumphantly displays the value of Emmet's contribution to gynæcology in connection with cervical lacerations, than a full exhibit of the evils which result from that condition.

"Its ordinary consequences are chronic peri-uterine cellulitis; epithelioma; subinvolution of a part or whole of the uterus; sterility; menstrual disorders; cervical endometritis; granular and cystic degeneration; fungosities of the corporeal endometrium; neuralgia of cervix; dyspareunia; tendency to abortion; uterine displacements.

"There can be, on the part of those who have been properly impressed with the importance of this lesion, no question as to the truth that all the conditions mentioned may originate from this accident.

"No part of the body of a woman is so liable to the development of cancer as the uterus; no part of the uterus is so liable to it as the neck; and no tissue of the neck is so liable to it as the glandular lining membrane. Exposure of this by eversion, the result of laceration, would, theoretically, be supposed to be a fruitful cause of that affection, and practically observation abundantly supports theory in reference to the matter. My own observation has for several years made me feel sure of this, and that of Breiskey, Emmet, and Veit is recorded to the same effect. This alone affords a valid indication for the closure of lacerations attended by local engorgements and irritation."

I have endeavored, Mr. President, to state the case fairly in regard to this operation, giving the opinions of those who oppose as well as those who favor trachelorraphy.

If the conclusions reached by Murphy are correct, viz.: 1st "That repair of lacerations of the cervix is *usually* followed by sterility;" 2d. "That the character of the labor is *unusually severe* and *protracted* and that, in a large percentage, *laceration occurs a second time*," I should feel that it would be actual malpractice to operate again upon any woman who was liable to become pregnant, and thereby expose her to the dangers referred to.

The testimony in my possession is, nearly all of it, in favor of trachelorraphy in cases such as I have cited. Did the limits of this paper, already too long, permit, I could cite many cases where pregnancy followed the operation—showing that it cured sterility, instead of producing it, and that re-laceration dtd noi occur at the time of delivery, nor was the "labor unusually severe or protracted."

This, however, is a very important subject, and I shall in a subsequent paper dwell upon these points more at large.

It is somewhat difficult to follow up one's cases and ascertain the results of operations. Many patients being seen in hospital practice, when they are discharged cured, are lost sight of forever. It is only by taking the trouble to learn the ultimate effects of trachelorraphy, that these disputed points can be definitely settled. I therefore invite reports upon the effects of this operation from those who have operated; as to its effect in causing or curing sterility; its effect upon labor, if any; and whether laceration occurred a second time, and if so, whether in the same place or not.

These reports I will tabulate and publish.

The truth is all we seek to find and impress, and in the search our eyes should not be blurred by prejudice or preconceived opinions.

926 Farragut Square.

A CASE OF APOPLEXY AND APHASIA IN A BOY TEN YEARS OLD.

BY TALBOT JONES, M.D., ST. PAUL, MINN.

So unusual is it to encounter apoplexy in young children, that probably few physicians even in extensive practice, or those making diseases of the nervous system a specialty, have met with a case. Its extreme rarity is dwelt upon in all the literature of the subject. It is a little curious that every author I have consulted has not only insisted upon the infrequent occurrence of apoplexy in children, but all of them

have employed the same adjective, "rare," to express it—a hint that in the compilation of books, authors not only employ the ideas of others, but their very language as well.

Thus, West says it is "rare;" so does Steiner. Ellis remarks "it is a rare disease," with which Tanner agrees; while Sir Thos. Watson, Bouchard, Charcot, Rosenthal and others agree that it is "rare," although occasionally observed.

According to Sarmoni's statistics, of 5,678 cases of cerebral hæmorrhage (*Riv. Clin.*, December, 1872), it is rare between the ages of 4 and 22 years. The generic term apoplexy is not synonymous with cerebral hæmorrhage, and this fact should be constantly borne in mind in a study of this affection. There may be a cerebral or a meningeal apoplexy; the latter, far from being rare in infants and children, is, according to Cruveilheir, the cause of one-third of all the deaths occurring in still-born children. The case I shall report is where an extravasation of blood occurred in the cerebral substance, the interesting features being the age of the patient, the aphasia, and certain points relating to localization. H. G., a wealthy merchant of Beaver Falls, Minn., brought his son, aged 10, to my office on January 24, 1884, having been referred to me by Dr. A. G. Stoddard, of that place. The boy was rather robust, and had never been sick in his life, save from occasional constipation.

One day during the middle of March, 1883, while engaged with his brother in coasting near his home, he suddenly felt faint and nauseated, walked to his house several rods off, complained of pain in his head, dizziness, and vomited profusely. He then became rigid, partially unconscious, but when aroused would quickly lapse into a soporose state. His face was flushed, pulse slow and full, whole body flaccid, and his extremities cool. His temperature in the axilla, according to Dr. Stoddard, who was called, was below the normal (95° F.). His breathing was stertorous and somewhat explosive; reflex irritability abolished, and there was well marked conjugate deviation of the eyes. His respiration was labored and irregular; the face tumefied from venous congestion, and cyanosed. Deglutition could still be performed.

He remained in a semi-comatose state for thirty-six hours. After emerging from his unconsciousness he appeared dazed, bewildered, and experienced a confusion of ideas.

There was complete right hemiplegia, without disorders of sensation; conjugate deviation of the eyes, and lateral rotation of the head to the side of the clot, together with paralysis of the right half of the tongue. The special senses were not affected. Not all the muscles of the face were paralyzed; those chiefly involved were muscles whose nerve supply is derived from the cerebral ganglia—the elevators of the wing of the nose, the buccinator, and respiratory filament of the facial, etc. It is extremely rare for all the muscles innervated by the facial nerve to be coincidently paralyzed in cerebral hæmorrhage. The patient fully aroused, it was now discovered that he had lost the power to express his ideas in articulate language. The aphasia was complete. His ideas were evidently well stamped on the mind, but there was an inability to communicate them by language—the so-called aphasia from "verbal ideation" of Jaccoud. The boy could read but not speak. Though unable to employ language, his expressive countenance showed that there was no mental decay. When spoken to his affirmative or negative replies would be by a nod or shake of the head. This aphasia lasted for a period of five weeks and gradually passed off. His command of language constantly improved, though slowly. If a picture of a ship was placed before him and he was asked what it was, he became strangely agitated, and would probably call it a horse. Indeed, his father informed me that the boy had to learn his language over again. When I examined the patient some six months subsequent to his attack, the aphasia had about disappeared. While able at this time to walk, his right leg yet showed signs of paralysis; in bringing this limb into play it described slight oscillations from behind forward. The right hand and foot were cool, and the right thigh one-half an inch less in circumference than its fellow. The patella tendon reflex was exaggerated. Electrical reactions were apparently the same on both sides. The tongue was no longer paralyzed. The effects of the paralysis were much more pronounced in the arm than in the leg.

Owing to the paralysis of the extensors of the fingers and hand, contractures of the flexors were well marked, and the fingers were firmly drawn into the palm of the hands. It does not come within the scope of this paper to discuss the aëtiology of this so-called "late rigidity."[4] Bouchard's explanation that it depends on atropic descending changes in the pyramidal strands, has been disproven; while Todd's hypothesis that the cause is owing to cicatrization around the clot, with the loss of a certain amount of cerebral substance, is by no means accepted by all authorities. Probably the true cause is yet to be explained.

One of the most interesting features of this case was certain choreic movements of the muscles of the paralyzed side—the so-called post-hemiplegic chorea, which was first described by S. Weir Mitchell and subsequently studied by Charcot.

With regard to the aëtiology, the patient's age at once suggested an embolism as the probable cause. A careful examination of the heart, however, showed the absence of roughing, or valvular lesion, nor had he ever suffered from scarlet fever, syphilis, or an aneurism. The cause was, doubtles, owing to an extravisation of blood in the cerebral mass, due to the rupture of a minute aneurism; for Charcot goes so far as to assert that rupture of aneurisms of minute arteries is always the immediate cause of cerebral apoplexy. (Charcot & Bouchard, *Arch. de Physiol. 1868*). If what we have recently learned through the investigations of Fritsch and Hitzig, Ferrier and others concerning the localization of cerebral lesions is to be relied upon, the site or position of the extravasation in this case was in the left frontal convolution or that region connecting it with the island of Reil, and with the central and parietal convolutions.

SUGGESTIONS ON THE MANAGEMENT OF BRISME FORCE OF THE KNEE.

BY CHAS. F. STILLMAN, M.D., OF NEW YORK.

Lecturer on Orthopædic Surgery in the Woman's Medical College.

It must first be decided that the ankylosis is fibrous, and these suggestions are only applicable to such cases as are distinctly of that character. If inflammation is present to any great degree in or about the joint, the operation is contra-indicated; but there are very few cases which do not exhibit some slight existing sub-acute inflammatory state in some parts of the osseo-ligamentous structures constituting the joint. This is sometimes sufficient to give rise to reflex contractions of the muscles governing the joint, and one authority states that the indication for dividing the tendons of these muscles, as an adjunct to the operation of brismé forcé, is the reflex spasm exhibited when the tendons are pressed upon.

There are not many cases, however, where tenotomy is really necessary, if the muscular contraction be merely reflex, and not due to actual shortening of the muscular structure. It may be subdued by a much more simple process, which has the merit, also, of producing excellent results upon any inflammatory condition which may exist. The patient should be advised to assume the recumbent position for a time varying from three to five weeks, the knee to be enveloped in a large poultice during this entire period. The recumbent position should be insisted upon. Not once during this time should the foot be touched to the floor for the purpose of bearing weight.

The poultice itself should be sufficiently long to completely encircle the limb at the knee, and sufficiently broad to extend some distance above and below the joint. It may be made of oil meal and bran, flaxseed, elm and marshmallow leaves, or any other substance which is preferred by the surgeon. It is best prepared in bags, the poulticing to be inserted into the bag, after which the fourth side is sewed up. It is then to be placed upon the knee hot, and covered with oil silk and a roller bandage.

A few weeks of this poulticing renders the part comparatively free from inflammation, and the tissue about the joint cool, relieved from reflex excitement, and ready for the operation itself. This is so well described in the different text-books on the subject, that it is superfluous for us to refer to it in detail here, since this article is written with the idea of presenting the preparatory and after-treatment only prominently before the reader. Anæsthesia is, of course, required for the operation, and if the patella is adherent it must be loosened, and the joint liberated by rapid movements, the adhesions giving way usually with considerable snapping and crackling, but much more easily than if the poulticing and rest be not practiced. Instead of placing the limb on a posterior splint, or applying extension by means of the weight and pulley, the writer prefers to use a local fixation splint, which also combines local extension, and its chief advantages are that the extension is continuous without regard to position, and the changes in the angle of the limb may be effected from day to day without removal of the splint.

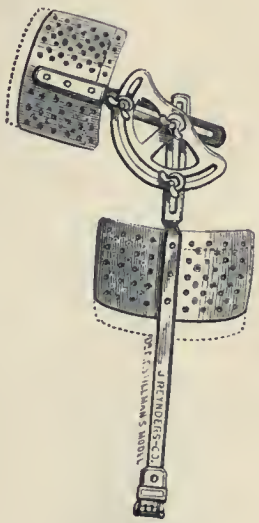

Fig. 1.

The splint shown in Figure 1 is the one employed, it being an improved form of the sector splint devised several years ago and presented to the profession through the American Medical Association at that time. But it is also provided with metal strips interiorly, which terminate in a roller and buckle. It is applied to the limb with adhesive plaster and plaster of Paris. Two pieces of moleskin plaster as fresh as possible are cut in the shape of a fan, as shown in Figure 2, and have sewed to each of them a tag of strong webbing. These are then placed, one upon either side of the limb, as shown in Figure 2, their extremities being interlaced.

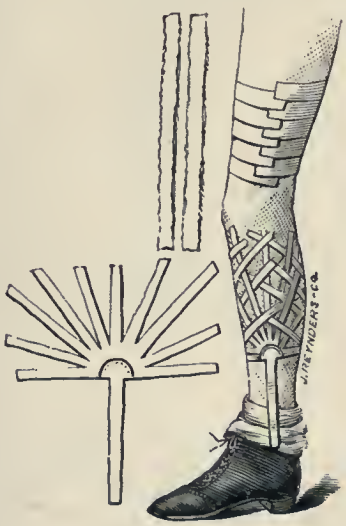

Fig. 2.

Strips of the plaster are now cut for the thigh of sufficient length to more than encircle it. These a wound around it snugly, as shown in Figure 2, and

the leg and thigh bandaged with a flannel roller. Over the leg and thigh the plaster of Paris bandage is now rolled, both above and below the knee, as shown in Figure 3, the webbing tags being allowed

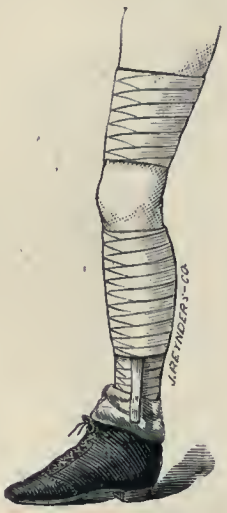

Fig. 3.

to protrude inferiorly. The brackets are now placed in position, one on either side of the limb, taking care to have them in the axis of the thigh and leg respectively, and to have the pivotal center of the splint in the pivotal axis of the knee (Figure 4). A

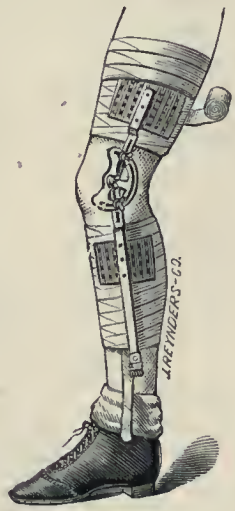

Fig. 4.

few more turns of the plaster bandage secures the splint in place, and the plaster surface is next neatly covered with a long bleached muslin roller, to insure cleanliness (See Figure 5). After the plaster has become firm, which takes but a few moments, the extension should be exerted against the muscular bulk of the thigh, and secured by the upper clamp of the sector. The other clamps should now also be tightened, which firmly fixes the limb in any desired position, and we have the surface over the joint exposed and the joint itself held securely and yet extended. A rubber bandage, cut in strips and sewed together in the centers, after the manner of scultetus, or an ordinary rubber roller, is next placed around the

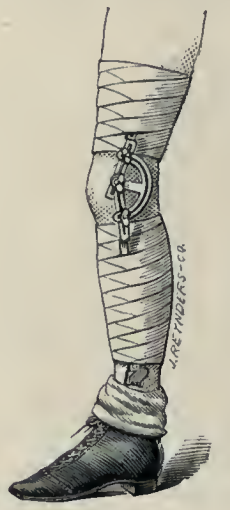

Fig. 5.

knee, exerting a moderate amount of circumferential pressure. Over this may be placed an ice-bag, which has the effect of restraining such inflammation as may arise. At the expiration of from four to six days the lower and center clamps of the sector may be loosened without decreasing the amount of extension which is held by the clamp on the upper strip. The leg may now be bent a few degrees from the position assumed after the operation, and clamped securely in a new position. It is now safe to remove the ice-bag, and replace its action with a stimulating ointment under the rubber, or in case the rubber is uncomfortable and there have been no inflammatory conditions, a large poultice may be substituted. Extension is still kept up, however, and the knee secured at various angles, day by day, until the whole range of motion, which was secured by the operation, is permanently obtained without the splint having been removed. Then the two lower clamps may be loosened, the upper one still being secured for the purpose of maintaining extension, and free motion allowed in the joint. Crutches are then supplied and the patient permitted to go about. The use of this splint during the after-treatment permits the joint to be kept perfectly under the surgeon's control, and tends to a more prompt and complete recovery of the joint functions, than by the method usually recommended in the text-books.

PROLONGED MAINTENANCE OF LIFE WITHOUT FOOD.—The *British Medical Journal* has a note from Dr. Charles J. Renshaw, describing a case of a widow, æt. 58, who, while suffering from uterine cancer, went thirty-nine days and fourteen hours, supported by morphia and water alone. She took 3 grains of morphia hypodermically injected twice daily.

DENTAL FORMATION IN THE NASAL CAVITY.

Prof. E. Fletcher Ingals, of Chicago, sends us the following regarding misplaced teeth:

Recently, in examining a patient who had for some time been troubled with nasal catarrh, I found on the floor of the left naris, four centimeters back from the nostril, a hard substance, feeling, when touched with the probe, like bone. On seizing this with forceps the patient experienced severe pain, like that caused by striking a sensitive tooth, and for several hours afterward he suffered from pain like a severe toothache.

The pain caused by touching this body was so exquisite, that it was necessary to produce complete anæsthesia before a thorough examination could be made.

Dr. R. H. Lull administered ether for me, and I then engaged the foreign body in the snare, which I use for nasal tumors, and drew it out, when it was found to be a supernumerary tooth, resembling closely the canine, and measuring two centimeters in length.

About five millimeters of the tip of the root had been exposed in the nasal cavity, and below this the tooth was covered with soft tissue, which was adhered to it down to the crown. The dentine of the crown was perfect, excepting a small perforation at its apex, but within the tooth was decayed.

How long this tooth had been projecting into the nasal cavity could not be determined, but it must have been a considerable time, for the portion of the apex of the root which was uncovered had lost by erosion about a millimeter in thickness from its entire circumference.

It is comparatively rare for teeth to grow in the roof of the mouth or nasal cavities, yet several such cases have been met with. In nearly all instances the "wild tooth," as it is called by the laity, is found to be a supernumerary tooth or a misplaced canine.

Prof. E. S. Talbott, who examined the tooth and the patient's mouth, states that, from the appearance of tartar and green stain upon the apex of the crown, it must have occupied a diagonal position in the hard palate, the crown being in the roof of the mouth, pointing toward the central incisors, and the apex of the root in the naris, pointing posteriorly. A ring of tartar encircled the crown from about three millimeters below the upper surface to nine millimeters above the lower surface, and that part of the crown below the ring was covered with a fungous growth, which proved that the part only was exposed in the mouth.

The tooth had decayed because of the imperfectly formed apex of the crown, until the pulp had become exposed and death resulted, causing alveolar abscess, the sack of which came away with the tooth. While it is not uncommon to find supernumerary teeth in the roof and anterior part of the mouth, it is very rare to find the apex penetrating the nares.

ERGOTINE prepared by the manufacturing chemists, Gehe & Co., of Dresden, costs 200 marks a gramme, or more than $3.12 a grain. That is about $21,840 a pound avoirdupois.

MEDICAL PROGRESS.

ON THE MILITARY EMPLOYMENT IN ACTIVE SERVICE BY THE FRENCH, OF SANITARY OFFICERS, APOTHECARIES, AND STUDENTS OF MEDICINE.—The principle that every citizen is a soldier is, we are told, the foundation of the military system of France; but it has received a new force and a more complete application from the law of the 27th July, 1872. According to this law, every young man of 20 years of age, free from bodily defects, owes to the country five years of active service, five years in the territorial army, and six years in the reserve of the territorial army. Independent of other exemptions, students of the Polytechnic School, of other schools not bearing upon this subject, and public teachers and ministers, are not called upon, but must serve the public in their respective capacities during a period which varies from five to ten years. The law authorizes young men who hold the diploma of *bachelier*, or a certificate bearing that their studies have been carried on at a public school to a certain fixed standard, and those who pass a certain examination held for the purpose, to engage for one year as voluntary recruits, at the end of which they are sent home, provided they can give evidence of having received a good military training; but they are always, as long as they have not served for the time fixed by law, subject to be called out again in case of need.

Many of us will remember that during the war of the Rebellion, in consequence of the repeated drafts which the country was called upon to fill, our medical colleges suffered demoralization, and our medical students were kept in a constant state of ferment, from their being liable at any moment to be called upon to do military duty. Consequently, a reference to a new law promulgated by the French Government, June 5 and July 22, 1883, (*Alger Medical*), bearing upon this subject, may be of interest to the readers of the JOURNAL.

It deals with sanitary officers, a grade which has no special meaning to us; with apothecaries of the second class—that is, those who are still in a state of apprenticeship; and with medical students who have received twelve inscriptions toward attaining their degree as doctor—that is, who have completed about three-fourths of their medical studies. These three classes are placed in the same category, but it is only with the latter that we are specially interested. Therefore we will not translate literally, but simply give succinctly those paragraphs of importance that bear directly upon the subject.

The decree of M. Grevy, the President, sets forth:

1st. The before-mentioned classes are comprehended in the category of men placed at the disposition of the reserve of the active or territorial army; they can be employed in case of active service to aid the physicians and apothecaries on active duty in the reserve or in the territorial army, by employment in the corps, in the hospitals or ambulances.

2nd. They will be termed auxiliary physicians or auxiliary apothecaries, according to their specialties.

The medical students will not receive this title until after an examination proving their aptitude according to special rules.

3rd. Their position will be that of student adjutants of the administration of the hospital service (our medical cadet). Their pay, in time of war, is the same with that of other student adjutants. Their uniform is fixed by special regulation.

4th. The auxiliary physicians and apothecaries, from the date of receipt of their nomination, are subjected to the same rules of discipline and of service as are the physicians and apothecaries of the reserve. They can also be called upon in time of peace, in the same manner.

The Minister of War, Thibaudin, in consequence of this decree, issued certain regulations. Articles 1 and 2 simply give in detail what has just been referred to, as the secretaries of faculties and of schools are required to furnish regular information to the department of their material suitable for such purposes, and after having passed their examination they are reported as ready for service. Article 3 gives a list of exempts, from causes which would exempt them under other circumstances. Article 4 defines their letter of nomination, to which is annexed the order of route they are to take to reach their place of service, which gives them free transportation. Article 5 refers to their record with recruiting officers to relieve them from such liabilities. Articles 6, 7, 8, 9 are not essential here.

Article 10. In time of peace the auxiliary physicians and apothecaries are under the same obligations with the men of the troop, as concerns the change of domicile and residence. They are assimilated, as far as the service is concerned, with the physicians and apothecaries of the reserve of the territorial army, and, like them, can be called upon under the same conditions to undergo certain periods of instruction.

Article 11 requires a personal report from them each year.

Article 12 relieves them, at their will, after twenty years of this kind of service, from all further military service.

Article 13 gives the Minister of War the power to deprive them of their grade, for cause.

Article 14 gives them the right to resign this grade and employ from personal motives, but Article 15 makes them in consequence private soldiers, remaining under the obligations imposed upon that class, with the exception that they can return to this grade if they so desire.

Article 17 requires an examination on the following subjects:

Ideas on the general organization of the army, its discipline, and of military hierarchy.

Ideas on the organization of the sanitary service in quarters and in the field.

Regimental infirmaries; the fitting out of ambulances; the providing for regimental infirmaries in the field.

Military hospitals.

Relief posts; ambulance infirmaries and litters.

Movable and stationary field hospitals.

Ambulances of evacuation; trains of evacuation.

Relief for the wounded on the field of battle. Bandages and improvised apparatus. Carrying and transportation of the wounded. Litters and conveyances.

The Geneva Convention.

Article 18 declares that these examinations are to be held before a jury composed of a surgeon of the first-class as president, and two surgeons of the second class, in any town which is the seat of a faculty or school of medicine. The members of the jury are to be appointed by the General in command of the army corps, at the suggestion of the directors of the sanitary service. The medical students can be submitted to this examination by addressing a letter to the director of the sanitary service of the locality in which they reside. In case they do not pass this examination, they continue in their previous military position.

MEDICINE.

TRICHINOSIS IN GERMANY.—Minister Sargent's report from Berlin, enclosing Consul Fox's report, has been published in the Consular Reports, No. 35, by the State Department. The place where the disease took most formidable dimensions was at Emersleben, near the Harz mountains, about five miles from the city of Halberstadt in the province of Saxony. The fully ascertained cause of the outbreak, was the consumption, mostly in an entirely raw and partly in a partially raw condition, of the flesh of three hogs raised in the vicinity, mixed with that of a Hungarian hog. The extraordinary spread of the disease through five villages in a circuit of two miles occurred because the potato harvest was in progress, and it was customary for the people to eat raw meat and bread in the fields at such times, instead of spending time to go to and return from their homes.

The inspection is alleged by the inspector and butchers to have been made in accordance with the laws, though the record required by law was not kept. The inspector was the village barber, the person habitually employed in Germany for such inspections, who passes an examination as to his fitness for the task. But the three preparations made for microscopic inspection, under the law, are not sufficient to give safe results, as trichinæ are sometimes found only after 30 or 40 trials.

The whole number of cases so far (Oct. 26) is about 438, of which 31 have died, and 19 more will probably be fatal. There are about 700 inhabitants in the village, living in about 120 houses. There are 267 sick in 85 houses. These sad scenes lead to several conclusions:

1st. American pork is exonerated from the suspicion of being the cause of this disaster, and its prohibition upon the the theory that it is more harmful than other pork is unwarranted.

2d. The inspection laws of Germany are totally inadequate to prevent such calamities so long as the people indulge the habit of eating pork raw. In the language of Prof. Hertweit in the convention of butchers of Berlin, in 1865: "You know what you

have to do in your kitchens, and if you do it properly we have no need of inspection."

An article published last spring in a newspaper of Berlin, which is usually supposed to express official ideas, held to the view that the prohibitory decree was proper, because a government must recognize in its acts the tastes of its people; that Germans like to eat pork raw and because the fact that well-cooked pork is safe, and uncooked pork is dangerous, does not make any difference. The government will keep out the American article because it is dangerous in a raw state.

Prof. Brouardel has an article on this subject in *La Tribune Medical*, in which he says:

"After studying the epidemic at Emersleben, we attempted to ascertain for what hygienic reasons the German government had prohibited the importation of pork from America. M. Virchow declared to us in the most formal manner that there was no scientific demonstration that the use of American pork had given rise to a single human case of trichinosis, either isolated or to others as an epidemic. He made this statement in the presence of M. Hertwig, Veterinary Director of the Berlin Abattoir and Chief of the Microscopic Departmemt for the examination of material in seeking for trichinæ, who confirmed the opinion. They both affirmed, furthermore, that not a single case of human trichinosis had occurred which could be attributed to the eating of American pork raw."

The declarations relating to hygiene as made by M. le conseiller aulique Koehler before the Reischstadt, Jan. 9, 1883, in answers to MM. Richter and Rickert, as to why prohibition should be continued, were in effect:

That the epidemic of Dusseldorf (1881) was, according to a communication from the Royal Prussian Government, due to American origin; 15 cases and 3 deaths.

So at Breme and at Rostock American pork was also accused. But it is excessively difficult to furnish proofs in these accusations, because

(*a*) The diagnosis of trichinosis is difficult, having been but recently studied and resembling other diseases.

(*b*) The American meat, smoked and but little salted, is mixed, dressed and sold as German sausage.

M. Koehler insists upon the impossibility of a satisfactory examination of American pork on the frontier, from the dissemination of portions, etc.

We recommend the public not to eat the flesh of American pork without cooking it, which is the surest means of killing the trichina. But if the Americans, the English and the French eat partially cooked pork with disgust, we Germans are very fond of raw or but little cooked pork. But we can not by laws change the taste of the country; those laws would be useless and would interfere with the liberty of the individual. A prohibitory law is, therefore, legitimate and necessary. It should be but temporary and subordinate to the condition of American merchandise. When American commerce examines its pork properly, then these laws would become useless. Under these conditions the arguments used are without application in France.

Pulsatile Pleurisy.—Dr. J. Cornby (*Archives Générales de Médecine*) has published the records of twenty-seven cases bearing upon the subject, and concludes by discussing the symptoms, diagnosis, pathology, ætiology, and semiologic value of this phenomenon. As to symptoms, in all the cases observed there existed a chronic pleurisy of the left side; the pulsations were synchronous with the arterial pulse over a greater or less extensive area, ordinarily the inferior thoracic portion, giving the appearance and sensation of an aneurismal pulsation, sometimes very marked and energetic, sometimes feeble and scarcely perceptible. The empyema forces out the intercostal spaces, producing one or two pulsatile tumors the size of a nut, an egg, or an orange, which may be situated near the precordial region or near the vertebral column; it may occupy the left lumbar region. There is, according to some, an absence of expansion, but according to Dr. Cornby it is present and characteristic. In all the cases published up to the present time empyema was coexistent.

The diagnosis is between this affection, pulsatile pneumonia, pulsatile cancer of the lung, and aneurism of the aorta. The onset, progress, and special signs of pneumonia would suffice to distinguish it. Cancer is difficult to distinguish. In aneurism of the aorta the thrill and the souffle must form the principal points of distinction; in other respects it remains obscure, and an exploratory capillary puncture is indicated before performing the operation for empyema.

The cause of this peculiar symptom is due to the pressure upon the lung laterally from without inwards, and adherent to the pericardium, so that the pulsations of the heart are communicated with force and directness to the pleura contained purulent fluid. In the most of these cases, where a post-mortem examination was made, phthisis pulmonalis was present.

The value of this symptom is in effect: That a certain number of pleurisies of the left side present pulsations synchronous with the heart beat. These pulsations occupy the lower portion of the thorax over an extended space, or are limited to a tumor, the seat of which is variable on the thorax, and may even occupy the lumbar region. These thoracic pulsations are due to the transmission of the heart-beat through the sclerosed lung and liquid pleural contents. They are only found in chronic purulent pleurisy with marked retraction of the lung which is adherent to the pericardium. The pulsations indicate purulence and the complete destruction of the lung.

Sounds of Fluid in the Stomach on Succussion as a Symptom of Dilatation of the Stomach — M. Audhoui is giving a clinical course at the Hospital de la Pitié at Paris, on diseases of the stomach (*Gazette des Hopitaux*), and regards this symptom, which he terms clapotage, as of importance in diagnosis. It is produced by the oscillatory movement of a liquid contained in the stomach, and is heard by succussion, by the brusk impulse of one hand, or

by the two hands, as in determining fluctuation. It can also be excited by the movements of the patient. In 1833, Duplan the elder noticed that this sign disappeared on vomiting, but recurred after the patient took something. In 1865, Chomel considered it a pathognomonic symptom of a special dyspepsia, which he called the dyspepsia of liquids, supposing that the stomach, while still capable of digesting solids, could not digest fluids,

M. Audhoui does not agree with Chomel. He considers the presence of this fluid as due in part to an exaggerated and abnormal secretion of the salivary glands and the mucous follicles of the stomach, and in part to the imperfect digestion of solid substances which liquefy in the stomach. Accepting this theory, what are the causes of retention? Inertia of the stomach or narrowing of the pylorus. The inert stomach allows itself to become dilated and distended. These sounds then, obtained on succussion in the living, are diagnostic of this dilatation, but it does not follow as a matter of course that this condition will be equally recognized after death; and three cases are given to illustrate this assertion:

1. A man who committed great excesses, dyspeptic in the highest degree, with an affection of the kidneys. He vomits bilious matter, drinks a great deal, and vomits again the greater part of the same. In his case a considerable degree of dilatation of the the stomach was determined. He dies of uræmic poisoning, and his stomach is found empty and of normal dimensions.

2. A woman taken with puerperal fever after confinement, and subject to constant and free vomiting from the commencement of pregnancy. After death the stomach is found filled with fluid, and dilated so as to extend almost to the pubis. After ligating its two orifices it is punctured, and returns to its normal dimensions.

3. A man dying from fibrous occlusion of the pyloric orifice. During life diagnosis of dilatation of the stomach. After death alcoholic injection into the stomach, which returned to its normal dimensions.

The treatment of inertia of the stomach has been successful in some cases by the use of the cold douche to the part, and by such massage as would tend to carry the liquids from the stomach into the duodenum. Electricity, so far, has failed.

It is important, in order to give this symptom its due diagnostic value, to mark the distinction between this pathological condition and the same physiological symptom, which shows itself immediately after the ingestion of fluids. Chomel denied that there was such a physiological symptom, but M. Audhoui has established the fact in a variety of ways; and the point is to determine the duration of this physiologically. It (the duration) varies according to the subject, to the quantity and to the quality of the liquid taken, from twenty minutes to two hours and thirty minutes.

So that, to make this symptom of pathological value, it must exist several hours after the taking of food or drink, and at a time when the healthy stomach would necessarily be empty—in some cases it never ceases to be present.

CHOREA DEPENDENT UPON A NASAL AFFECTION.—M. Gilli presented the notes of a case to the Societe de Biologie (Comptes Rendus) occurring in a small boy, 8 years of age, who suffered from great difficutly of respiration, nasal voice, constant blowing of the nose, snoring at night, respiration by the mouth, keeping it partly open at all times; there was a catarrhal engorgement of the naso-pharyngeal passages, with abundant nasal mucous secretion and momentary and variable obstruction of the nasal fossæ by hypertrophy of the turbinated bones, and deviation of the septum; obstruction total of the Eustachian tube on the right, and partial on the left. The pharynx was affected with a chronic phlegmatia with glandular engorgement; there was simple scrofulous catarrh.

In the treatment there was ordered two nasal injections daily of warm salt water. Three days later, the child complained of severe pains in the head, localized particularly in the frontal region, whenever the nasal injection was used, and in spite of the use of a fine rubber sound introduced into the nostril, so as to prevent the closure of the nasal orifice, or the accumulation of fluid in the frontal sinuses. At this time the mother noticed irregular movements of the right arm and hand, which she recognized as choreic, having had chorea herself in her childhood. I observed these movements also; they were not general and did not affect the right leg; there were frequent grimaces of the face and movements of the tongue from time to time, but the arm and right shoulder were particularly the seat of the characteristic oscillations.

I suspended the use of the nasal injections, and in a little time the movements were scarcely perceptible. The mother, seeing the good effect which the injections had produced upon the pathological condition, renewed them cautiously, when the same phenomena recurred; severe pain in the head, more especially frontal, and the involuntary movements of the right side, which prevented the child from writing, but not from eating. This chorea only lasted 8 to 10 days, and notwithstanding the persistence of the treatment, to which the child became habituated by degrees, it disappeared gradually; at the same time the naso-pharyngeal catarrh was relieved.

This chorea, connected with an affection of the nasal passages, and excited by the topical treatment, demonstrates the marked reflex sensibility of the naso-pharyngeal mucous membrane. A case of arthritis, which came under my notice some time since, suffered painful sensations in the left arm, with a numbness of the fingers, which was relieved from time to time on the expulsion of an enormous dry crust, moulded into contours of the turbinated bones, from the left nostril.

SURGERY.

THE EXTRACTION OF TEETH WITHOUT PAIN.—The method of placing a small rubber ring between the crown and the root of the tooth, has been used in this country and put in print, but we do not re-

member exactly where, has been revived in France, and M. Bauverd, of Geneva, has addressed a communication on the subject to M. Paul Bert, who in turn has presented it to the Société de Biologie (*Comptés Rendus*).

His method consists in placing in the position indicated the rubber ring, which varies in size according to the tooth, from a half to four millimeters; in consequence the tooth becomes loosened, and in time —about a week—will fall out ot itself. Generally about the fourth day patients request its extraction, which is done without pain. There is no pain accompanying this procedure, only a slight inflammation of the gums, which disappears when the tooth is removed. It is only applicable to those teeth with but a single root, and is especially useful in those teeth of the second dentition that are in malposition. The incisors and canines are readily removed; the molars themselves are advantageously loosened.

M. Galippe, in discussing this question, said that it had long been known that the careless employment of rubber threads has resulted in accidents of this kind. One case he referred to, in which a young girl lost her two superior central incisors, from the thread being allowed to remain too long on the lateral surfaces of the teeth. But he was surprised at the statement that there was no pain produced, knowing as he did that the ordinary application of rubber frequently produces severe pain, which it is sometimes difficult to tolerate, and is accompanied to a more or less marked degree of periostitis. Frequently a small bit of cotton pushed up accidentally during mastication between the tooth and the gum, is sufficient to give severe pain and loosen the tooth.

On the Treatment of Wens by the Injection of Ether.—M. Marcel Lemoyez (*Bulletin Général de Therapeutique*) discusses the various modes for the treatment of wens (by which he means sebaceous tumors of the face and scalp) their advantages and disadvantages. The use of the bistoury is often followed by erysipelas. The use of caustics gives rise to violent pain, a slow healing and deformed cicatrices. He then passes to the method practised by Vidal of injecting ether, which acts, like caustics, by inflaming the contents of the cyst and producing suppuration—perhaps, also, as a special solvent upon the fatty matters and cholesterine crystals. It produces no pain other than that of an exaggerated tension of the walls, nor any elevation of temperature, augmentation of saliva, or acceleration of respiration. It must be as pure as possible. In amount five or six drops at a time is sufficient; as to its frequency, in small wens every two days, three injections should suffice. In the large wens of the scalp, six or eight injections of ten drops may be necessary. The mode of injection is simple, the tumor being isolated by the fingers, the largest glandular orifice of its covering, which is generally encrusted, is selected, and the needle passed in perpendicularly; after its introduction it is moved a little freely within the cavity to break up the sebaceous matter and to irritate a little the walls of the cyst, and thereby assist in the more effective action of the ether. These injections are stopped when the tumor enlarges, becomes thin in its walls, reddens, and gives a slight sensation of pain. Then the base is pierced and a jet of pus and serum escapes, the cystic matter being eliminated as a soft whitish mass mixed with shreds, which are the detritus of the pouch. This takes place about the sixth or eighth day. During the following days the cyst suppurates, and little by little the skin retracts over the diminishing tumor. About the fifteenth to twentieth day there remains only a small, lenticular, indurated core covered by sound skin, with no visible trace of the orifice throngh which the mass of the tumor was eliminated. The case cited in illustration is that of a debilitated man, addicted to alcohol, in whom M. Vidal, after ten injections of ether, caused the complete disappearance in a month's time of a wen on the scalp of five months' standing. During the treatment there was no pain, no precautions were taken, the patient frequently exposing himself to cold without protective dressings, and remaining in the room where there were four cases of erysipelas.

MATERIA MEDICA AND THERAPEUTICS.

The Dosimetric Employment of Chloroform in Producing Anæsthesia.—M. Paul Bert presented to the Société de Biologie (*Comptés Rendus*) the method employed by Dr. Pezraud, which consists in placing a very fine small compress over the nose and mouth of the patient, and dropping upon it with each respiration one drop of chloroform; at the end of a few minutes, if insensibility does not follow, two drops are given, and by this method complete insensibility is produced at the end of seven to ten minutes. During this time the pulse and respiration remain regular, and anæsthesia obtains in a progressive manner, with only the slowing of the pulse to indicate it; there is no agitation and no hyperæsthesia, even with alcoholics or nervous women. When anæsthesia has been produced, it is maintained by three or four drops of the chloroform every minute. By calculation, it takes in this way a mixture of ten to fourteen grammes of chloroform with 100 liters of air to produce the anæsthesia.

Gout Treated by Pepsine and Pancreatine.—Dr. Girard (*Gazette Medicale de l'Algerie*) gives a case of the relief of gout by this means, to support the view that it is the result frequently of bad digestion and vicious nutrition. His case is that of a man 40 years of age; good complexion; no hereditary antecedents; who was frequently affected by attacks of the gout which kept him in bed for weeks at a time. After trying various plans of treatment, he dieted himself upon a little wine and bouillon until he became so feeble that a serious result was feared.

Dr. Girard, upon seeing him, ordered four spoonsfull of *peptone Dupesne* (?) a day, in a little warm and salt water. In two days, he had improved sufficiently to take ordinary food. For a long time he had suffered from a sensation of heaviness in the stomach, and somnolence after meals. He was put upon 60 centigrammes of pancreatine after each meal. The

sense of heaviness disappeared as by enchantment, and the inflammation of the articulations disappeared entirely after six months of treatment, since which time he has had no return of the symptoms.

INHALATIONS OF CARBONIC ACID IN WHOOPING-COUGH.—M. Campardon at the Société de Thérapeutique referred to his use of carbonic acid, as suggested to him by the practice of Dr. Petit, of Royal, who put his little patients for a few moments into a grotto, the atmosphere of which was strongly charged with carbonic acid. In the case of a child ten years of age, whose whooping cough was of five months' standing, and who suffered from frequent cough with repeated vomitings, thereby interfering with alimentation; after trying many medications without effect, he had recourse to inhalations of carbonic acid. made in the seltzer water apparatus, and discharged through a rubber tube. The cure was complete after several applications. He considered it important that the gas should be charged with water vapor.

In the discussion, M. Constantin Paul considered its action as due to an anæsthetic action on the laryngeal mucous membrane. He had used it to relieve pain in certain affections of the respiratory passages, particularly in tubercular laryngitis.

M. Dujardin-Beaumetz considered the action as analgesic, and thereby suppressing the laryngical reflex which produced the cough.—*Journal de Therapeutique.*

GYNÆCOLOGY.

CASE OF APPARENT AMENORRHŒA, AND FALSE PREGNANCY.—(Extract fron the Clinica de Saragoza, published in *El Siglo Médico*, Madrid.)

In 1874 a woman 30 years of age, married, who was accidentally separated from her husband for several months, presented herself at the clinic of Valladolid, and declared herself to be pregnant, and she did not know why. Her symptoms were, suppression of the menses for nine months, consequent enlargement of the abdomen, finally reaching the normal size of a pregnancy at term, enlargement of the breasts with pigmentation, vomiting, and movements felt of the child. There was absence of ballottement, active movements of the child, and the heart-beat. Four days after her entrance she was taken with labor pains, and passed per vaginam a large quantity of blackish blood, partly liquid and partly coagulated, accompanied with severe pains and a violent hæmatemesis. Convalescence was slow, with marked chloro-anæmia.

Feb. 4, 1877, Dr. Delgado Alba, who had attended this case, was called in haste to assist in a case of labor, and found himself in the presence of his former patient, who declared that there was no mistake this time, as her husband had been with her for the past eleven months. The supposed labor was attended with the same phenomena as before noted, the patient suffering from its effects for fifteen days.

Neither on the first or second occasion, were there found in the matters expelled from the uterus, any vestiges of moles, portions of the placenta or fœtal membranes. — *Gazette Hebdomadaire des Sciences Medicales.*

AT the recent meeting of naturalists of the Eastern United States, Dr. Benjamin Sharp described Dr. Semper's method of making dry preparations for exhibition purposes, which, while it has been previously described, may be new to many readers. The method is applicable to objects of various sizes, but is especially adapted for the exhibition of dissections. An animal, for instance a mouse, is dissected so as to show the desired organs. It is then hardened by chromic acid in the method so familiar to microscopists. After becoming sufficiently hard, it is removed from the solution and thoroughly washed with water, the object being to remove as much of the chromic acid as possible. It is then transferred to weak alcohol, and then to stronger, until at last it is placed in absolute alcohol, the object being to remove all of the water in the tissues. From the absolute alcohol it is transferred to spirits of turpentine until it is thoroughly impregnated, and then it is simply dried in the air. The result is a rather strong and slightly elastic preparation which can be safely handled, and which displays the organs in their natural condition, without any wrinkling or distortion produced by contraction in drying. The various tissues closely resemble kid in their general appearance, and are of an ashy white color. By the use of the brush, the various organs may be colored as desired; or, should it be preferable to restore the natural hues, this may be accomplished with considerable success by coating the object with a mixture of glycerine and sugar. If this is done, it is necessary that the object be kept so that the dust is entirely excluded. The time required for these several steps of course varies with the size of the specimen, varying from one or two weeks to as many months.—*Science Record.*

MEMBERSHIP OF THE BRITISH MEDICAL ASSOCIATION.—Up to the year 1867, the thirty-fifth year of the Association, the issue of the *British Medical Journal* was 2,000, the membership of the British Medical Association had increased for several years at a rate ranging from thirty to forty. The issue of the *British Medical Journal* is now 12,000, and the increase of new members to the Association has been since 1867 at the annual rate of five hundred.

PROF. REICHERT, who for many years held the chair of Anatomy in Berlin, died after a short illness on December 21. He was succeeded in his professional duties only a few months before his death by Prof. Waldeger.

ÆSTHETIC CATHETERISM.—One of our exchanges records a case of what it calls "æsthetic catheterism," where a woman introduced the stem of a small lily into her urethra; it passed beyond the reach of her fingers and had to be removed by instruments.

DURING the academic year 1882–83, 672 M.D. degrees were conferred in France—465 were conferred by the Paris faculty, Montpellier 69, Bordeaux 46, Lyons 43, Nancy 21, and Lille 20.

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CHICAGO, ILLINOIS.

SATURDAY, FEBRUARY 23, 1884.

WHO ARE "MEMBERS ELECT" AGAIN?—Our Buffalo correspondent, whose brief letter will be found in the proper department, still appears to think that there are reasons for believing that the words "every member elect," commencing the last paragraph of the second article of the constitution, apply only to *delegates*, and do not include permanent members. His reasons are, that the paragraph alludes to voting and the presenting of credentials, while permanent members have no right to vote, and have "no credentials." The allusion to voting in the paragraph of the constitution would be just as applicable if only a part of the "members elect" voted as it would if all voted; and our correspondent is mistaken in his assumption that permanent members have no credentials. Every permanent member has credentials of the most satisfactory character in the printed records of the Association. And the clause of the constitution in question was not only understood to include all classes of members, but in the early years of the Association permanent members actually went to the registration table prepared to show, either by written certificates or the printed records, that they were members entitled to such registration. This practice was continued until the Permanent Secretary, to save the members inconvenience, began to have regularly at the registration table, for convenient reference, such volumes of Transactions as would enable him, or the registration officer, to verify the claims of any who might be present. And if at the next meeting, one whose name was not on the records, should present himself for registration as permanent member, he would not get very far before he would find his credentials or evidences of membership called for. If the words "every member elect" means only *delegates* elect, the reading should be just as harmonious and consistent throughout the paragraph if the word *delegate* was substituted for that of "member."

Perhaps our correspondent will be better satisfied if he makes the trial and notes the kind of agreement he would have between the first line of the paragraph and the two last. Thus, "every *delegate* elect, etc., etc., etc., must etc,, etc., etc,, inscribe his name and address in full, *specifying* in *what capacity* he attends, and, *if a delegate*, the title of the institution, etc." We do not think it requires a very "judicial mind" to see that the words "every member elect" in the constitutional paragraph, either includes members acting in *more* than *one capacity*, and some who are *not delegates*, or the two last lines are meaningless.

"VINDEX" AND THE JUDICIAL COUNCIL.—Perhaps the most striking feature in the many criticisms which have been written in regard to the organization and doings of the National Association, is the manifest ignorance of the critics concerning the topics about which they write. For instance, a member of the St. Louis Medical Society, who is also a member of the National Association, gravely presents to the first named society the two following resolutions, and by letter seriously asks us to help him to gain a consideration of them in the Association:

Resolved, 1st, That the professors and lecturers in medical schools and colleges are requested to refrain from letting their names appear in the circulars, prospectuses and cards.

2d., That the American Medical Association be respectfully petitioned to deny representation to all medical colleges which parade the names of the professors in their circulars, and act contrary to the spirit of this rule.

He seems to be entirely oblivious to the fact that the constitution of the American Medical Association has in it no provision for the admission of delegates from any medical colleges whatever, and that no college has had an official representative in the Association during the last dozen or fifteen years. But we have nowhere seen a more interesting exhibition of this quality in criticism than is furnished in the second letter of "Vindex," to be found under the head of domestic correspondence in this number of the JOURNAL. In that letter occurs the following sentence:

"Had the Medical Society of the State of New York attempted, through its delegates, to move to

amend the Code of Ethics of the American Medical Association, the motion would, under ruling, have gone to the Judicial Council, and been disposed of, by your showing, without appeal."

A man of the high character for general and professional intelligence possessed by "Vindex," must certainly know that framing and amending codes of ethics, or constitutions and by-laws, are *legislative* acts; and that among no civilized people is the work of legislation committed to *judicial* tribunals.

The latter are established to *execute*, and not to *make* laws. Had "Vindex" taken the trouble to read the eleventh by-law of the Association, by which the Judicial Council is established and its duties defined, he would have seen that it was not authorized to take cognizance of or decide any questions but those of a "*judicial* character," and more especially such as involve "personal character, including complaints and protests and all questions on credentials." And should the Association so far forget its own constitutional regulations as to refer a proposition to amend the Code of Ethics, or any other legislative proposition, to the Judicial Council, it would be promptly reported back as not coming within the jurisdiction of that body.

By the action of the Association in general session at the annual meeting in Buffalo, June, 1878, propositions to amend the Code of Ethics were placed on the same basis and subjected to the same rules as propositions to amend the constitution. If "Vindex" will glance at section 7 of the constitution, he will see that "no amendment or alteration shall be made in any of these articles, except at the annual meeting next subsequent to that at which such amendment or alteration may have been proposed; and then only by the voice of *three-fourths* of all the delegates in attendance." If our friend "Vindex" will spare a few minutes more, in looking over the proceedings of the annual meetings in Buffalo, in 1878, and at Richmond in 1881, he can see it actually demonstrated that an amendment to the Code of Ethics was presented in due form in the meeting in Buffalo; laid on the table; taken up and discussed at the next annual meeting in 1879 and laid over for further consideration, and finally taken up, fully discussed in general session, modified, and adopted by the required vote of three-fourths of the delegates present at the meeting in Richmond in 1881. How, in the face of the most plain provisions of the constitution and by-laws, and in the light of the actual proceedings of the Association of such recent date, otherwise intelligent men can hazard their own reputations by such reckless and erroneous statements as those made in the letter of Vindex, as well as by many others, is not within our comprehension.

PREPARATIONS FOR THE NEXT MEETING OF THE ASSOCIATION.—All the information we get points directly to the fact that the coming meeting of the Association in Washington is to be one of the most interesting and important ever held. Especially is this true in regard to the scientific work in the several Sections. But the remaining time for preparation is short, and all who intend to present papers should be sure to communicate the fact to the chairman of the Committee of Arrangements before the end of March.

SANITARY PROGRESS.—The recent State Sanitary Convention held in Columbus, Ohio, was well attended, and elicited much interest. A permanent State organization was effected, with a prospect of doing much good.

SOCIETY PROCEEDINGS.

SUFFOLK DISTRICT MEDICAL SOCIETY.

[Section for Clinical Medicine, Pathology, and Hygiene.]

ALBERT N. BLODGETT, M. D., SECRETARY.

January 9, 1884. The meeting was called to order at eight o'clock, Dr. R. T. Edes in the chair. A summary of the proceedings of the last meeting was given by the Secretary.

Upon motion of Dr. George B. Shattuck the business of this meeting was suspended as a token of respect to the memory of the late Dr. Calvin Ellis, formerly President of the Suffolk District Medical Society.

Dr. Edes in announcing the result of the motion made some very appropriate remarks relating to his early acquaintance with, and life-long esteem for, Dr. Ellis, a man whose character would long be a living influence in the medical element of Boston. Dr. Edes then called upon Dr. George C. Shattuck, who spoke as follows:—

Dr. Shattuck said that he could not refuse an invitation to say a few words at this time, and to bear his testimony to the worth and excellence of our late associate, Dr. Calvin Ellis. It certainly is well for us survivors, after the departure of a highly esteemed associate, to meet together and put on record our appreciation of worth and skill and our sense of loss. Excellence and distinction in our profession are the result of original endowment, of industry in training faculties, in acquiring knowledge, and of fidelity and skill in the discharge of duties. A medical man must devote years to preliminary education, and then must be constantly studying and training his powers of observation and reasoning, as well as adding to his

stores of knowledge. There are those here who were associated with Dr. Ellis in his early years and will tell us of the qualities for which he was remarkable as a young man and a student. I became associated with him when he had already acquired reputation as a teacher and a practitioner, and was looked upon as on the sure road to distinction. I noticed and admired his knowledge and skill as the pathologist of the Massachusetts General Hospital and instructor in clinical medicine in the Medical School. His ability, knowledge and fidelity were recognized by professors and students. He was evidently the coming man in his department. And yet he worked patiently in subordination, was always kindly and courteous, and ready to carry out the plans of those who had the direction of affairs. When his predecessor retired in accordance with his own wishes and ideas of duty, Dr. Ellis was chosen professor of clinical medicine and visiting physician of the hospital, without any solicitation on his own part or from his friends, but because those who had the appointing power recognized that he was the fittest man to discharge the duties. The wisdom of the appointment was shown by many years of successful work. And when obliged by painful illness to retire from work, those who appointed him, those who worked with him, and those for whom he worked, preferred to wait for three years in the hope that his health and strength might be renewed so that the same skilled labor might still be at the service of medical science and instruction.

These hopes have been disappointed. He who knows what is best for each and all of us has removed him. We must acquiesce in this decision, whilst we may cherish the example of conscientious devotion to duty, of scrupulous regard to the rights and feelings of associates, of self-sacrifice in ministering to the sick and the poor, and in efforts to teach the young and the ignorant. May we all be able to profit by his example, so that when to each of us the summons to depart comes, the plaudit "well done, good and faithful servant," may be on the lips of survivors.

The Secretary then read the following letter from Dr. Henry I. Bowditch:—

JANUARY 9, 1884.

To the Secretary of the Section of Clinical Medicine of the Suffolk District Medical Society:—

DEAR DR. BLODGETT,—I am very sorry that I am at present confined to the house, and shall therefore be unable to be at the Memorial Meeting which is to be held by the Clinical Section of the Suffolk District Medical Society at its first meeting after the death of our friend, Dr. Calvin Ellis. The Section, in which he so long labored, acts most appropriately in proposing to have this Memorial Meeting.

Dr. Ellis has just died, after a long and distressing illness, which he bore without complaint and with a manly fortitude, while, however, looking forward hopefully, as was his nature, to its ultimate result, because it was non-malignant.

He was my pupil in his days of medical study, my assistant at the Massachusetts General Hospital, and afterwards my successor there, and also in the Professorship of Clinical Medicine at Harvard University; and, finally, he was always a beloved friend. For many years past I have often sought his advice, and no one that I met gave wiser counsel than he did; for his words were uttered only after a most rigid examination of the matter in hand. To me his loss is simply irreparable; for no one can fill another's place.

But I do not write this in order to praise him or to mourn for his loss. His own life is his highest praise; and the termination of the earthly career of a really noble soul has not a particle of sorrow connected with it, which is not far outweighed by a kind of satisfaction, not to say joy. The beauty of Dr. Ellis' every-day life from the cradle to the grave seems well rounded out by his serene, uncomplaining death. If with this death we remember the years of almost hopeless and severe suffering so sweetly borne by our friend, then death has no horrors, but comes rather as an angel of divine mercy to the relief of suffering humanity.

If by his intellectual acts a man has left, as Dr. Ellis has surely done, his impress for good upon hundreds who have either sought his instruction, or have met him in the daily walks of life, then the natural sorrow which we must feel for his loss is wonderfully mitigated; and he becomes forthwith a silent, but not less effective, exemplar, to all who knew, loved, and respected him. And where is there one who intimately knew Dr. Ellis who did not love and respect him?

Since his death I have been led to inquire into the antecedents of his family and of himself before we became personally acquainted, and I have been interested and instructed to find how many of his more striking moral and intellectual traits he owes to heredity. I shall give, of course, only a glimpse of the facts, because my purpose, on the present occasion, requires nothing more.

Two hundred years ago, or thereabouts, his earliest progenitor in this country came here from the ranks of the hard-handed independent-souled yeomanry of England. He settled in Dedham, Mass., and there tilled his acres and reared his family. A home on the site still stands, and it is occupied, as it has always been, by one of the same stock and name. Calvin Ellis, our deceased associate, was the seventh descendant from this first settler. It would seem that as the generations have passed along, solid work, and a belief in the real excellence and nobility of work, has been ever a prominent trait among all his ancestry. But there was with it also a love of culture, so far as that was possible in the earlier times. The Ellis family has given clergymen, physicians, lawyers, and energetic merchants, and many honorable and excellent men and women to the world. His grandfather brought up a family of eleven children, and, aided by the thrift and economy of his wife in her wise management of his household, left as the net result of their joint lives $30,000 for their heirs. Surely here was a trait of energy, physical and intellectual, worthy of commendation. This same grandsire believed so strongly in work that he had a contempt for the bare idea of a man's having "nothing

to do." His favorite expression was, "I would rather my son should throw stones from one heap to another, and then throw them all back again, than have 'nothing to do.'"

Again, fully believing in the excellence of the intellectual, as well as the physical training of any youth, he had his youngest son prepared to enter Harvard.

Unfortunately, as the story goes, the youth was by his brothers fairly laughed out of trying a college life.

Dr. Ellis' parents moved into Boston before his birth, and the father, Luther Ellis, became an energetic and successful iron merchant. Retiring from active business with a property ample for his wants, he had his son Calvin, our associate, educated for Harvard. Both parents have left loving memories of themselves in the hearts of their children, and of others. Their home, as the story comes to me, was one of those delightful places where parents and children mutually loved and respected and helped one another.

Religion, too, was taught in and governed it. The boys and girls went, in their earlier days, regularly to church. They were not governed by tales of terror as to the future, but were led to honorable thought and action rather by the examples of loving kindness and of independence of thought given to them by their parents.

They were styled Unitarians, a term of obloquy formerly—less so of late, since science has tended to break down sectarianism, that stronghold of the devil. The mother who presided over the domestic affairs had a gentleness and firmness of purpose, combined with a bright, contented, and self-sacrificing spirit. Her example proved to the children the lovableness of these qualities. The father, after long suffering borne with exemplary patience, died during the first year of Dr. Ellis' college life. Thus we see that while receiving from his earliest ancestors the fine manly traits of love of work, and of liberality and independence of thought, with a desire for culture of the intellect, so far as was possible, his parents left him also a legacy of sweet and winning traits, that shone so conspicuously during all the years of our friend's life.

As a boy he was of a quiet character, less boisterous than most boys of this age. He was, however, intelligent and bright, and a favorite with all who knew him. His college life was uneventful. He was an athlete, and was in the first boat's crew ever organized at Harvard. He took no very high honors, but he faithfully did his allotted tasks. Upon entering the Medical School, he used to say, he first awoke to his life's work, as play had been his object during his college days. He became earnest and was ever at work, to do what the hour called him to perform.

When I met him as an assistant he had no flourish or pretense or servility about him. He was always deferential, but not crouching submissively to me, or any one, though cheerfully undertaking what was imposed upon him by his superiors. He rarely, if ever, failed in the due performance of his task; always had that bright, yet dignified manner which he subsequently bore in his professional career. In his meetings with you, his associates, I am sure you always found him simple, thorough, and true. When dealing with a professional associate he needed no "code" of by-laws to keep him fair and honest. His own well balanced mind and generous spirit forbade him to do anything to injure a brother physician's reputation, even in the smallest degree.

To do so by a word, a covert sneer, or even a smile of doubt in the presence of by-standers, as is done at times by some of the stoutest defenders of the "Code," he abhorred. I shall never forget the glee (for, among other good qualities, he heartily enjoyed a joke) with which he told me, only a few months ago, how he and others had *squelched* instantly a proposition coming from a committee of the Counselors of the Massachusetts Medical Society, a proposition, which, had it been adopted by the Society, would have violated one of the prime rules of common courtesy, and even those of simple hospitality in many of our country villages and small towns.

As a teacher of medicine I need say nothing, as most of the younger men of this society must have known him well in that capacity. His object was to teach a student the methods that should be pursued in order to come to a perfect diagnosis. I was much struck with the remark made by one of the juniors of our profession, when I asked what Dr. Ellis' reputation was as a teacher among the pupils. He paused before reply, and then, in substance, said as follows: "Dr. Ellis while unraveling any case was less brilliant than some other more fluent professors, and he was called a little 'slow,' and tedious, as some thought. But, upon our arrival at Vienna, by comparing our method of grappling with cases in the German hospitals with the desultory and imperfect examinations made by students of some noted schools in other large cities of our country, we soon found that we had been *more thoroughly drilled* than they. The result was, that we understood more quickly and fully than they did all of the intricacies of a case."

No higher praise could be given to any professor than this simple, but significant, expression of one of his pupils.

He has left an unfinished work, entitled, I believe, Symptomatology. On this he was laboring every hour that his disease permitted him to work, even to the last few days of life. I sincerely hope that it has been so far finished that his literary executors can publish it. I was visiting him one morning while he sat half erect in bed. He was working then upon it, and was kind enough, at my request, to read me a short extract. From that, I was led to feel that the work would not only add to his well-merited reputation, and serve the student and junior practitioner long after the writer's death; but that it would perhaps mark an era in the correct study and practice of clinical medicine similar to that which followed the publication of the great French teacher Louis' works. In truth, it seemed founded upon the same principle that underlies all of Louis' works, namely, the absolute necessity of making a most careful diagnosis of a case before proceeding to treat it. It was fortunate for several American students of fifty years ago, that

even Louis, the great clinical teacher of that day, whose principles are now everywhere more or less perfectly carried into practice, was considered rather "slow" by his compatriots. Consequently, our small coterie of Americans and of Swiss students had his oral instructions all to ourselves, which has, of course, been of immense advantage to every one of us during our lives.

In Dr. Ellis's connection with the Harvard School his influence was always for a higher education and better practical measures. He may be called a "conservative reformer." He never moved until his judgment approved of a plan. When once decided in his opinion, no obstruction could prevent him from boldly urging forward the cause against the opposition of even the most powerful. This was seen especially in his efforts at progress in the Medical School's late reforms. During his last illness, he told me that every step taken forward was violently and persistently opposed; and I sincerely believe that had it not been for the efficient work of Dr. Ellis, aided by his earnest young coadjutors in the Faculty, no reform would or could have been accomplished, and as Dean of the Faculty no one contributed more than our friend did to these very desirable results. During his long illness he, from love of the school, remained one of the Faculty. At length his disease compelled him to resign his position of Dean, but he still hoped, even until the end, that in the intervals of his torture be would at times be able to meet and to lecture to his pupils.

Surely I think that even with these brief hints at the various passages of the life, and allusions to the intellectual and moral qualities of our friend, we can feel in the language of Wordsworth, that

"The child is father to the man,"

and his days were

"Bound each to each by natural piety."

May this fine example of a life of true work not be lost on any of us. Yours very truly,

HENRY I. BOWDITCH.

Dr. C. D. Homans said: Probably no one present knew Dr. Ellis so long or so intimately as I did. Perhaps Rev. Dr. Bartol may have done so, but certainly no one else. We were boys together, we were in college together, we were abroad together, and we have been together ever since. When in college Dr. Ellis, though a good scholar, was not brilliant, but was a hard student and a continuous worker. He was always a favorite, and was much interested in the pastimes of those days. He was an athlete, and was a member of the first boat club which was formed at Harvard College. We bought a boat together when we were in the Massachusetts General Hospital, and in our spare hours were fond of rowing on the Charles River. The water then came up almost to the stone building which at that time comprised the entire hospital. He always kept up his love for athletic exercise, and even in his last years was very fond of walking, often preferring to go on foot rather than in his carriage to visit his patients. In some ways Dr. Ellis was particularly fortunate. He was hardly ever ill during his life until the commencement of the disease of which he died. He was fortunate also in possessing a competence, and was not obliged to trouble himself in regard to pecuniary matters. While a student in the Medical College he was one of the few who attracted the attention of the late Dr. J. B. S. Jackson, who for years made all the autopsies in and around Boston, and from him Dr. Ellis derived that love for and knowledge of morbid anatomy which was so useful to him in after life. He was a worker as long as he lived. During his last illness, in fact up to within a few days of his death, he was engaged in the intervals of his sufferings in the preparation of a medical work for the press, which he left nearly finished.

It afforded him a great deal of satisfaction to be informed that, within a few days of his last attack, a letter had been received by a friend from a young physician, at present in Vienna, who stated that as a result of the careful clinical training received from Dr. Ellis, students from Boston were able to profit much more largely from the advantages offered by European hospitals than were those coming from other American cities and schools.

The disease from which Dr. Ellis died was ulcer of the duodenum. It first commenced about nine years ago, and continued to cause him more or less suffering from that time until his death. It was at first feared that it might be malignant, but the course of the disease disproved this, and it was then supposed to be ulcer of the stomach, but finally the diagnosis of duodenal ulcer was made, and was found by the autopsy to be correct. Death finally ensued from perforation and consequent peritonitis. Dr. Ellis never was willing to make a positive diagnosis of his own case. Through all his sickness he never lost his interest in what was going on. Just before his death he was planning what he would do when he got out again. For some time he was driven in a low carriage, and he was getting tired of this, and thought of buying a coupé as soon as he was strong enough to go out. During the last year he had been obliged to keep his bed much of the time, yet he always got out a little whenever possible. At times he would leave his bed and go for a drive, and on returning would go at once to bed again. On the day of the last municipal election he rose, and was driven to the polls, and voted, and returning home went immediately to bed as usual, and never rose again. Through all his sickness and suffering he never murmured or complained, but was always patient and resigned, and when the pain became easier his cheerfulness and good-humor at once returned. He was always glad to see his friends, and seldom spoke of his own distress.

In all he did Dr. Ellis was actuated by a strong sense of duty and intense love of his profession. He had the greatest interest in the University and Medical College, which he has proved by the fact that he has bequeathed his entire estate to the University after the death of his sister, most of it for the special benefit of the Medical School. As a physician he was loved and respected; as a counselor his advice was sought far and near; as a teacher and professor and public spirited man the entire community knew

and appreciated his worth, while only those who were intimate with him can know how faithful he was to every demand which friendship might make upon him.

Dr. Sargent, of Worcester, having been requested, sent the following communication:—

"I am more than gratified, for I am also flattered, in being asked to contribute something to the testimonial of the general 'admiration of the noble and generous qualities' of Dr. Calvin Ellis, whose recent death is so great a loss to the profession and to the public.

"My acquaintance with Dr. Ellis was of long standing, but it was rather friendly than professional, for I never had occasion to have any professional relations with him whatever. It commenced in Paris in one of my periods of residence there, in the year 1850, and I see him now in his long walk from the neighborhood of the Garden of Plants to the schools and the hospitals. Then as always he was studious, sensible, thorough, faithful, and reliable. I renewed my acquaintance with him on his return to Boston, and was somewhat instrumental in his being placed on the commission for investigation of the peculiar pleuro-pneumonia of cattle, nearly twenty-five years ago. I had afterwards some other public relations with him. His sound sense always, his good judgment, and sincere convictions, and his fidelity to them, won, as they deserved, the greatest respect from the profession and the public.

"I never had the advantage of listening to any of his instructions from the professorial chair, but as I have had them described to me by young men who were so fortunate as to be his pupils, their thoroughness and richness and exactness must have been a very valuable contribution to the distinguished excellence which is so conspicuous in the Harvard Medical School.

"Commencing practice in Boston in a new era, when the microscope had just begun to peer into pathological anatomy, and its use was so seductive and engrossing as, perhaps, to warrant the witticism of our justly admired Dr. Holmes, then not more distinguished in literature than in medicine, and probably the best read American physician of that time, 'Now for an era of little men,' he recognized all that was true in what was new, and adopted all that was valuable. And so with him always. His scope was large, and great good sense directed his judgment and governed his work. His influence and his example have been a great good and an honor to the profession, and an advantage to the public.

"Let no man say that merit shall not command success."

HARVARD UNIVERSITY, MEDICAL SCHOOL.

BOSTON, MASS., January 7, 1884.

DEAR SIR:—In reply to your letter of January 4, it gives me great pleasure to express to you the sympathy of the entire Medical Faculty in the feeling which has prompted your Society to appoint an evening for holding memorial exercises in honor of our late Professor of Clinical Medicine, Dr. Calvin Ellis.

Although I am not authorized by the Faculty to promise any formal coöperation in your services, yet the individual members of that body will doubtless gladly avail themselves of the opportunity thus afforded of testifying by their presence to their great respect for Dr. Ellis' noble character, and to their high appreciation of the value of his services as Dean of the Faculty during a most important epoch in the history of the School; as a clinical teacher of rare power and enthusiasm, and as a practitioner of medicine gifted with unusual soundness of judgment.

Yours very truly,

H. P. BOWDITCH, Dean.

DR. A. N. BLODGETT, Secretary.

Dear Doctor:—I regret to say that owing to illness in my family I shall not be able to attend the meeting to-night. Very truly yours,

JAMES C. WHITE.

Wednesday.

MY DEAR BOWDITCH:—I am grieved not to be with you to-night, to show by my presence at least my appreciation of the character of our late associate and friend.

The profession will do justice to his memory.

Let me add my tribute to his fidelity as a physician, his ability as a lecturer, his integrity as a man.

Faithfully yours,

D. HUMPHREVS STORER.

Jan. 9, 1884.

Dr. Oliver Wendell Holmes, who was unable to be present, sent the following touching letter:—

CALVIN ELLIS.

My recollections of Dr. Ellis go back to the period of his pupilage. Of the large numbers of students with whom I have been in relation as teacher, I do not remember one about whose future I felt more assured. He had all the signs of promise—active intelligence, industrious habits, love of his work, a vigorous frame, a cheerful temperament, an agreeable presence stamped with every outward sign of a sincere and manly character. I looked forward to his becoming a leading practitioner with a confidence which his after career fully justified.

He united many rare qualifications. He had studied disease long and diligently, in the changes left by it in the various organs, and thus laid the foundations of his skill in diagnosis. But he never forgot that medical science is only the handle of the medical art. His assiduity, his patience, his self-devotion as a practitioner were unmeasured and unstinted, as I have known from personal observation. He forgot everything but his patient, he remembered everything for him in the chamber of sickness comforted by his quieting and commanding presence.

Every interest of the profession was very dear to him. The Medical Faculty of the University of which he was so long the Dean, found him a most willing laborer and a generous benefactor. The Boston Medical Library was indebted to him for valuable services and liberal contributions. He could not be otherwise than faithful in all that he undertook, for integrity—wholeness of character—belonged to him in its fullest measure.

Some of you knew this brother of ours more intimately than I can have known him. You will not think, I am confident, that I have exaggerated the excellencies of this wise and skillful physician, this true and goed man, whose loss will long be felt by the profession and the community. O. W. H.

NEW YORK, *January* 7, 1884.

DR. ALBERT N. BLODGETT, *Secretary*:

My dear Sir:—I beg the privilege of offering to the members of your Society my sincere condolence in the loss which they have sustained. I had not the pleasure of a personal acquaintance with the late Calvin Ellis; but he was well known to me, and to all interested in medical education, as a painstaking, conscientious student of disease, and as an able, patient, and effective clinical teacher. In his death not only the School with which he was connected, and his professional brethren in your city, but the profession of the whole country and American medicine have sustained a great loss. Cut off in the midst of his useful labors, and at an age when many more years of valuable services in behalf of medical education were to have been hoped for, our only consolation is in the reflection that he leaves a noble example which should incite others to follow in his footsteps.

Will you kindly remember me to those who will be present at the meeting on the 6th inst., with the assurance that I should have been glad to have been able to ayail myself of your invitation to be present on that occasion.

With much esteem, very truly yours,
AUSTIN FLINT,
418 Fifth Avenue.

Rev. Dr. Bartol, upon being invited to make some remarks, spoke with great feeling and emotion as follows: I am here, Mr. Moderator, through courtesy and kindness on the part of this Society. I have listened with great interest and gratitude to what has been said by those who have spoken before me. The atmosphere of this meeting seems like a new consecration to duty. This Professor of Clinical Medicine whom we have assembled to honor to-night was not a *professor* in any other way. Whatever mistakes or vices the science of medicine or its sister professions of theology and law may be liable to, Dr. Ellis was free from them. There was in him no assumption of wisdom or authority. He took no bias in any unprofessional conduct.

In speaking of what Dr. Ellis was, and did, and said, we have referred to him in the *past*, but my feeling toward him is such that I can only speak of him in the *present* tense. Whatever hope we may have of some future life, or heaven after we have left the body, is revived by such fidelity. Every word which has been uttered to-night finds an echo in my own heart.

Dr. Edward Emerson, of Concord, rose and said: "I thank you for the opportunity to say a word for the older students. The character of Dr. Ellis as a physician has been dwelt on in an appropriate and worthy manner in the remarks of those who have spoken. One special feature of his life has, however, not been touched upon, and that is his position among those who were so fortunate to be his pupils. He was a leader in the medical profession to a striking degree. He gave no long lectures on morals, delivered no tedious homilies, but his daily life exerted a gentle yet continuous influence, which was always a lesson to those about him, and was all the more powerfully felt because it was exerted unconsciously.

As a friend Dr. Ellis was always thoughtful, unselfish, and devoted, as I know from my own experience. For some time I was in the habit of going to him for advice, not professional but personal, and he always took a most paternal interest in all which personally concerned those more closely associated with him."

The Secretary then read the following resolutions, which had been prepared by one of the members, and which were adopted unanimously:—

Resolved, The Section of Clinical Medicine of the Suffolk District Medical Society at its first meeting after the death of Dr. Calvin Ellis desires to express its admiration of him as a professional associate, a great clinical teacher, and above all as a man of noble character.

Resolved, That our respectful sympathies are hereby tendered to the sister of Dr. Ellis in this her great loss.

Resolved, That the above resolutions, signed by the chairman and secretary of the Section, be forwarded to the sister of Dr. Ellis.

STATE MEDICINE.

CONNECTICUT STATE BOARD OF HEALTH SANITARY REPORT.

BY DR. C. W. CHAMBERLAIN, SECRETARY.

MORTALITY IN OCTOBER, 1883.

	HARTFORD.	NEW HAVEN.	MERIDEN.	WATERBURY.	NEW BRITAIN.	BRIDGEPORT.	NORWICH.	NEW LONDON.	MIDDLETOWN.	WILLIMANTIC.
Total deaths	102	75	17	39	16	49	30	16	28	5
Monthly death-rate	22	12	9	19	12	16	14	15	23	9
Zymotics	55	16	4	12	4	6	2	3	3	3
Infantile	50	28	..	7	6	20	10	9	6	2
Nervous diseases	5	15	..	3	..	4	..	..	4	..
Heart diseases	4	4	1	2	..	1	..	1	2	..
Scarlet fever	..	2	..	..	..	..	..	..	..	1
Typhoid fever	..	4	..	9	..	..	1	..	1.	1.
Typho-malarial fever	..	1	..	..	..	..	..	..	1	..
Malarial fever	2	1	..	..	..	1	..	..	..	..
Diphtheria and croup	43	3	..	..	4	1	..	1	..	1
Whooping-cough	..	1	..	..	..	..	..	..	..	..
Infantile diarrhœa	1	2	..	3	..	2	..	1	..	..
Diarrhœa and dysentery	6	..	1	..	..	2	1	..	..	..
Consumption	10	11	3	4	4	3	4	4	4	2
Pneu'ia and acute lung	2	2	1	4	..	3	1	..	1	..
Bronchitis	5	1	..	..	..	..	..	..	..	..
Old age	2	..	1	..	..	..	..	..	..	..
Railroad accidents	3	..	..	..	..	..	..	..	..	..
Accident and violence	..	3	1	2	1	5	1	..	2	..
In public institutions	7	9	..	..	..	..	..	..	10	..

The deaths from consumption, which always ranks high among the ten principal causes of death, indicate the usual increase that occurs during the spring

and autumn months, trying seasons for weak lungs in this climate. Thus far, however, the season has been very mild and the death rate has not so rapidly advanced from this cause. Bronchitis and pneumonia began to be somewhat prevalent during the latter part of the month. The weather has apparently been favorable to the development of malarial fevers, and an increased prevalence is quite generally reported. While perhaps rather more cases of intermittent fever, that is acute tertian ague, have been seen this season than for several years, in the districts where malaria has been prevalent for some time, yet the prevalent type generally is the typho-malarial and the less clearly defined varieties of malarial diseases. Typhoid fever, although steadily increasing in frequency, does not apparently so frequently drive out malaria, as malaria appeared to drive out typhoid fever when it first commenced to extend over the State, so that for years not a case of typhoid fever occurred over large areas, and it lost place among the ten principal causes ot death throughout the State. That the decreased frequency of typhoid was entirely independent of the malarial invasion now is quite clear. The return of typhoid is also not dependent upon the decrease of malarial diseases, as we see it side by side with all varieties of ague, not only where the latter has longest remained as one of the regular diseases of the region, but also where malarial diseases are entering territory hitherto never occupied, so far as human knowledge can determine, by any form of ague; and also where having existed quietly for several years, malarial diseases become epidemic, leaving but a small percentage of the people unaffected. The subject is too complicated to discuss here, but the increased frequency of both malarial diseases and typhoid fever are interesting features.

Stafford reports typhoid fever as more prevalent than usual. The table shows the mortality in the cities. The frequency in Waterbury is decreasing. Avon reports both typhoid and malarial fevers. Typhoid fever is reported from Hampton and like places, where malaria has not yet become prevalent; in no case any epidemic, but, as was formerly the case, appearing to a greater or less extent every autumn, the degree varying as sanitary regulations were transgressed or observed. A few cases of malarial fever are reported from Haddam and adjoining towns, from Tariffville as frequent; from Watertown and that region generally typhoid is reported, with not much malaria. From Thomaston fatal cases of both typho-malarial and typhoid fever are reported, and the former, with whooping-cough, stated to be the most prevalent diseases. Westport and New Canaan report both typhoid and malarial, the latter one fatal case of typhoid, and a death from this cause is also reported from Cheshire. This indicates the distribution of these diseases to some extent.

There was a decrease in the prevalence of diphtheria in Hartford early in October, but it was only temporary, and the mortality reached a higher point than in any month. The mortality as given last month since June was 90; the total to November 1st is 133.

In connection with the Chairman of the Board of Health of Hartford, a special study of the regions affected has been commenced. As before stated, the drainage of the houses themselves, the lack of traps and ventilation of the drains, and the storage of filth in vaults, and the like, appear to be the chief local factors. Contagion does not appear to have been the cause of the prevalence, except to a limited degree.

The city Board of Health have under advisement an ordinance for the proper sanitation of tenement houses which shall hereafter be constructed, as a measure to improve the general healthfulness of the city, as the defects of the present system, where no precautions are required, scarcely require argument to prove.

There have been quite a number of cases of diphtheria in New Hartford, three deaths from diphtheretic croup. A few cases of diphtheria are reported from North Manchester and Greenwich; cause, as usual, unsanitary surroundings.

The causal relations between filth, in its sanitary sense, including the products of putrefactive decay, and the prevalence of disease and increase of the death rate, have been repeatedly illustrated; while, on the other hand, the control rendered possible by such relations is an incentive to renewed exertions.

HEALTH IN MICHIGAN.

Reports to the State Board of Health, Lansing, by observers of diseases in different parts of the State, show the principle diseases which caused most sickness in Michigan, during the week ending Dec. 15, 1883, as follows:

NUMBER OF OBSERVERS HEARD FROM, FORTY-ONE.		For preceding week.
DISEASES ARRANGED IN ORDER OF GREATEST AREA OF PREVALENCE.	Per cent. of observers who reported the disease present.	Per cent. of observers who reported the disease present.
Bronchitis	63	46
Neuralgia	59	63
Rheumatism	59	71
Intermittent fever	51	66
Tonsillitis	51	46
Consumption, of lungs	51	46
Influenza	34	49
Pneumonia	34	32
Diarrhœa	27	27
Inflammation of kidneys	22	24
Remittent fever	20	34
Measles	20	15
Erysipelas	20	22
Scarlet fever	17	20
Typhoid fever (enteric)	15	15
Whooping-cough	15	22
Puerperal fever	15	7
Typho-malarial fever	12	15
Diphtheria	10	15
Inflammation of brain	10	5
Dysentery	10	12
Cerebro-spinal meningitis	7	0
Cholera morbus	7	2
Chicken-pox	5	3
Inflammation of bowels	5	15
Cholera infantum	5	2

For the week ending Dec. 15, 1883, the reports indicate that puerperal fever increased, and that intermittent fever, influenza, remittent fever, rheumatism, and inflammation of bowels decreased in area of prevalence.

At the State capitol, the prevailing winds, during the week ending Dec. 15, were southwest; and, compared with the preceding week, the temperature was lower, the absolute and the relative humidity less, and the day and the night ozone more.

Including reports by regular observers, and by others, diphtheria was reported present during the week ending Dec. 15, and since, at 20 places, namely, Antwerp, Big Rapids, Crystal Falls, Detroit, Duplain, Groveland, Grand Rapids, township of Grand Rapids, Howard City, Leslie, Laketown, Monroe, Niles, Pontiac, Pierson, Ronald, Sebewaing, Six Lakes, Winfield, Wheatland. Scarlet fever at 18 places, Adrian, Detroit, Eveline, Ensley, Grand Rapids, Kalamazoo, Monroe, Muskegon, Memphis, Owosso, Oxford, Plymouth, Roxand, Reynolds, Selma, Salem, Springville, Winfield. Measles at 12 places, Corunna, Cedar Springs, Charlevoix, Clinton, Detroit, Grand Rapids, Gaines, Monroe, Muskegon, North Adams, Pontiac, Swartz Creek.

HENRY B. BAKER,
Secretary.

LANSING, Dec. 19, 1883.

BOOK REVIEWS.

HEALTH, AND HOW TO PROMOTE IT. By RICHARD MCSHERRY, M.D., Professor of Principles and Practice of Medicine, University of Maryland, President of the Medical and Chirurgical Faculty of Maryland, etc., etc. Second edition. New York: D. Appleton & Co, 1884.

This is a small volume on private hygiene, the hygiene of the family, and is addressed more particularly to the non-professional reader. Avoiding scientific terms and tedious details, and dealing with his subject in an easy, pleasant style, the author has certainly presented his readers with a highly entertaining as well as instructive book, filled with valuable hints regarding the attainment and preservation of health, good morals, and happiness. Its pages are enlivened with witty remarks, pleasant anecdotes, and a kind of insinuating good humor calculated to improve the assimilating capacities of a confirmed dyspeptic, or even make an hypochondriac feel on better terms with himself. Altogether, it is one of the best books of the kind with which we are familiar.

J. C. H.

THE DISSECTOR'S MANUAL. By W. BRUCE-CLARKE, F.R.C.S., Senior Demonstrator of Anatomy and Operative Surgery at St. Bartholomew's Hospital, etc., etc.; and CHAS. B. LOCKWOOD, F.R.C.S., Demonstrator of Anatomy and Operative Surgery at St. Bartholomew's Hospital. Philadelphia: Henry C. Lea's Son & Co.

This is one of those invaluable aids to the student in his study of practical anatomy. It commends itself alike in regard to quality and quantity. While it is small enough to readily slip in the pocket, it is unusually complete in describing the steps in the process of exposing to view each successive structure to be dissected. It contains 49 excellent cuts, which are nearly all new, and which were drawn from preparations specially prepared under the direction of the authors.

J. C. H.

THE estimate now before the Municipal Council for the expenses of the Paris hospitals and hospices for 1884, sets them down at $4,046,600—being $123,300 higher than 1883, on account of the rise in the amounts and prices of the various articles of diet, and of some medicinal substances. From a comparison of the years from 1865 to 1882, the population of these establishments has increased by 21 per cent., the expense of medicines by 55 per cent., and that of diet by 41 per cent.

DOMESTIC CORRESPONDENCE.

PUERPERAL ECLAMPSIA.

On page 220, vol. I, of the JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION, I reported a case of puerperal convulsions. I now wish to report another case that occurred in my practice since. Mrs. P. H. sent for me in the forenoon of January 7, 1884. I found her suffering from fever, frequent micturition, general anasarca, nausea, violent frontal headache, great restlessness. Diagnosis: uræmia. Gave her three compound cathartic pills as a purge; pot. bitartart. and tinct. digitalis as a diuretic; pot. bromide and chloral hydrate, as a nervous sedative. Early the next morning I was called again, the messenger stating that she was in convulsions. I hurried to the house and found her conscious. Her husband told me that she had had three convulsions during the night. I now gave her an enema of forty grains of hydrate of chloral, and continued the treatment of the day before. In the evening of the same day I found that she had had no convulsions during the day. I gave her another enema of the same quantity of chloral.

January 9, I found her much improved, and by the 12th she was so far recovered that she could sit up; had no headache and no nausea any more, but still had a little ancsarca of the lower limbs. She took no other medicines than those above mentioned. This woman was in the eighth month of pregnancy. There was no dilatation of the os, and she had no pains.

January 25 I was called again, and found her in labor. On examination I found the os dilated. On rupturing the membranes, the liquor amnii escaped, which was thick, reddish (as if discolored by blood), and small in quantity. As I knew the child to be dead I gave ergot, and she soon gave birth to a female child in the third post-mortem stage, or putrefaction. After she had had the convulsions, the woman could not "feel the child," neither could I detect the fœtal heart. This shows that the child died during one of the convulsive seizures, and was retained in utero as a foreign body for two weeks and a half. The woman has given birth to fourteen children, and has had convulsions once before.

W. F. HERTZOG, M.D.

NEW JERUSALEM, PA., February 11, 1884.

WASHINGTON.

On January 29, a bill was introduced into the U. S. Senate for abolishing the office of Assistant Surgeon-General.

At the same date a bill was introduced into the House of Representatives providing for the sale, at public auction, of the Naval Hospitals at Chelsea, Mass.; Brooklyn, New York, and Annapolis, Maryland.

The newspapers of recent date (Jan 31) give an account of an interview of two medical men in the Government Service with the committee on the District of Columbia, House of Representatives. They expressed views in favor of a bill (H. R. 1791) which reads: That any corporation in the District of Columbia which shall withhold any privileges of membership therein from any person on account of said person being in the service of the United States, shall forfeit its corporate powers, and upon complaint and satisfactory proof thereof to the District Court, said court shall declare null said corporate powers, and restrain all persons from exercising them hereafter.

From what has transpired it is evident that this bill was introduced to restrain the Medical Association of the District of Columbia from making any distinction in its membership. As it is now constituted, it is composed of members and associate members. The members with full rights and privileges are those who devote themselves to their profession; the associate members have all the privileges of members with regard to consultations, fees, etc., but have not the right to vote. This class was established for the benefit of clerks in office, and others in government employ, a large and growing class of doctors in the District of Columbia, with whom the practice of medicine is a secondary consideration, from a pecuniary point of view at least. This Association performs no social or literary work—it simply meets twice yearly, or oftener if convened by request, to consider medical ethics It is difficult to see, however, how such a bill can influence it in any way, as it is in no sense a corporate body, and simply a voluntary organization.

OLEOMARGARINE, ETC.

HOUSE OF REPRESENTATIVES, Feb. 7.—Mr. Beach, of New York, from the Committee on Agriculture, reported back with an amendment the following preamble and resolution:

WHEREAS, It is alleged that the interests of the American agriculturists and dairymen are greatly and unjustly injured by the manufacture, sale and use of oleomargarine, butterine, suine, and imitation, artificial, and adulterated butters of different kinds, and of adulterated and imitation compounds and mixtures sold and consumed as dairy products; and

WHEREAS, It is alleged that fat and oils of hogs and cattle and of other animals, and also that vegetable oils are used in the making and compounding of suine, oleomargarine butter, butterine, and adulterated and imitation dairy products, and also that such fats and oils are used, and are imported and are exported to be used for the making and compounding of such artificial, adulterated, and imitation dairy products, and that such adulterated imitation compounds are surreptitiously sold in this country and elsewhere in competition with genuine dairy products, greatly to the injury of the agriculturists and dairymen of the United States; and

WHEREAS, It is alleged that the manufacture, sale, and exportation and disposition of said compounds, materials, and commodities is so conducted as to avoid general publicity, and to prevent the obtaining of accurate or desirable statistics in relation thereto, and to mislead and deceive the consumer as to the actual character, composition, and ingredients thereof; therefore,

Resolved, That the Committee on Agriculture be, and hereby is, instructed to inquire into and investigate the said allegations, and ascertain the facts relating thereto, and the facts and statistics of the adulterated and imitation compounds and mixtures of dairy products, and of the materials composing the same.

The amendment recommended by the committee was to and to the resolution the following:

And to this end the said committee is hereby empowered to send for persons and papers.

The resolution with the amendment was placed on the House Calendar, and ordered to be printed.

MARINE HOSPITAL SERVICE.

YELLOW FEVER AT HAVANA.—The Inspector of the Marine Hospital service at Havana reports to Surgeon-General Hamilton that there were 482 deaths in that city during the month of January. Thirty of these were caused by yellow fever, and of these 25 were among the merchant, shipping and private citizens, and the remaining 5 were from the army and navy. During the same month in 1883 there were only 14 deaths from yellow fever. This year has been noted for absence of hurricanes and high winds at that point.

RAVAGES OF SMALL-POX.—The Surgeon General of the Marine Hospital service is informed that small-pox is epidemic at Louisville, Ky., and that there were seven deaths from that disease in the Marine Hospital there during the week ending January 31. He has also received a letter from the Deputy Collector at Kodiak, Alaska, stating that small-pox was raging among the Indians in the western part of the Territory, and requesting that the officer of the Marine Hospital service at Sitka superintend the vaccination of the natives. Dr. Hamilton has referred the matter to the House Committee on Public Health, with the request that provision be made for granting the request.

PROPOSED SANITARY INSPECTION ON GULF COAST.—It has been suggested by an officer of the Marine Hospital service that a thorough inspection of all the cities on the Gulf of Mexico, not only in the West Indies, but in South and Central America and Mexico, be made at once, before the onset of extreme hot

condition, with reference to the quarantine service of the United States during the coming season. The matter will be presented to the Secretary of the Treasury for action. Secretary Folger has approved the recommendation made by Surgeon-General Hamilton for an immediate inspection. A medical officer of the Marine Hospital service and a revenue marine officer will be detailed to make the inspection.

Consul-General Sutton, who is stationed at Matamoras, advocates strongly the establishment of an international quarantine in the ports belonging to the United States and Mexico that border on the Gulf of Mexico. The commerce with Mexico has been greatly hindered by the lack of proper laws in Mexico, and by the arbitrary, uncertain and inefficient manner in which the local American quarantine laws are enforced. He drew up memoranda on this subject, which he laid before Señor Romero, minister from Mexico to the United States, Gen. Cuellan, and Gov. Canales for their consideration, which has been favorable and which will probably result in some definite action being taken. He considers that quarantine stations should be established at Vera Cruz, Tuxpan, Tampico, and Bagdad, in Mexico; and Brazos de Santiago, Galveston, New Orleans, and Mobile, in the United States, to be governed by such rules and regulations as shall be agreed upon by the two countries; the quarantine being intended to prevent infection, protect commerce and the passenger traffic. The expenses to be met by both countries, and the scheme to be perfected in time to meet the exigencies of the coming season.

MEDICAL CORPS UNITED STATES NAVY.

Acting Surgeon-General of the Navy.—Since the expiration of Surgeon General Wales' term of office, there has been neither chief nor assistant chief of the bureau. Dr. Hudson will act as Surgeon-General until a new one is appointed by the President, and it is inferred that a nomination of that officer may be still delayed some time.

NEW YORK LETTER.

To the Editor of the Journal of the American Medical Association:

Dear Sir:—I am under obligations to you for your editorial of Feb. 9. It confirms my statement, if any confirmation was needed, that the American Medical Association is in the grasp of a few men. Had the Medical Society of the State of New York attempted, through its delegates, to move to amend the Code of Ethics of the American Medical Association, the motion would, under ruling, have gone to the Judicial Council, and been disposed of, by your showing, without appeal. Such modes of action may secure, for long periods even, a simulation of peace and harmony, but volcanic eruption will surely, sooner or later, give vent to pent-up opinion.

The question of the right of a State Society to change its by-laws or code of ethics, and to retain its place in the American Medical Association, was of importance enough to justify some discussion. That question, more or less varied, was inevitable when States began to pass statutes regulating the practice of medicine within their respective bounds, and therefore, to define what was the meaning of the phrase—a regular doctor.

Had the credentials of the delegates from New York been received by the clerk on presentation, and referred to the Judicial Council for a hearing, it might have been justly made to appear that the New York State Society had only exercised its prerogative in amending its by-laws so as to make them consistent with the statutes of that State and public policy.

Your statements only confirm those of my former letter in showing that, however cunningly the machinery of the American Medical Association may have been devised in the interests of harmony, it certainly is not, in its plan or working, entitled to the name of "American," and must undergo material change.

Vindex.

Buffalo, Feb. 9, 1884.

Editor of the Journal of the American Medical Association.

Dear Sir:—Permit me to thank you for your kindly interest in the subject, and for your generous treatment of my note of recent date.

You have fully explained that the term *member elect* as used in the paragraph you quote: "Every member elect prior to the permanent organization of the annual meeting, or before voting on any question after the meeting has been organized, must exhibit his credentials to the proper committee and sign these regulations," was intended to include and did include all classes of members, or as you put it, "actually includes every member presenting himself for admission or registration." Your construction being official, must of necessity be accepted. As the opinion of an individual it might possibly be criticised, but as the official utterance of the organ of the Association, it, to members, must be conclusive.

The importance of having one source of authoritative interpretation seems well shown in this case.

To the unjudicial mind the term "member elect," as used above, might be deemed to apply only to delegates chosen but not qualified, and this view might appear to be confirmed by the words of the second line, "or before voting on any question," inasmuch as it is well known that a large number of permanent members can not vote.

This impression might appear to receive still further support from the emphatic words of the fourth line, "must exhibit his credentials to the proper committee," when it is remembered that the permanent members not attending as delegates have no credentials to exhibit.

There are then three chances in the single paragraph for the unwary to be misled. He is a member elect, he is one of a class of voters, and he must have credentials.

Surely the ordinary mind may be pardoned for not seeing in this a provision for the government of permanent members, who may not vote and who have no credentials.

weather, with a view of ascertaining their sanitary

In spite of what you say of the term, "these regulations," I still have doubts upon the subject, and will send you a note upon my difficulties as soon as I can get a reply to an inquiry addressed to the Permanent Secretary some three weeks since.

Sincerely,

H. R. HOPKINS.

INEBRIETY.

HARTFORD, Conn., Jan. 22.

My Dear Doctor:—The enclosed inquiries are addressed to you by the American Association for the Cure of Inebriates, which was organized in 1870 for the purpose of studying the nature and causes of inebriety from a purely scientific standpoint.

The purpose of these questions is to gather the practical experience and observation of leading members of the medical profession, as a basis for a more accurate knowledge of the nature and character of inebriety.

Full answers to these inquiries and other facts relating to this subject are most earnestly solicited, and will be fully credited to each reporter. The results of this investigation will be sent to each one free when published.

Trusting to hear from you soon, I am with thanks, very truly yours,

T. D. CROTHERS, M.D., Sec. of Committee
and Editor of *Journal of Inebriety.*

1.

Can you give any facts from observation bearing on the heredity of inebriety; particularly as to the presence of insanity, epilepsy, phthisis, inebriety, or other neuroses in the parents or relatives of inebriates?

Give cases with histories if possible.

2.

Can you give any history of inebriates whose drinking dated from or was influenced by head injuries, sunstroke, syphilis; or could be traced to mental shock, disease or injury of any kind; also to overwork, nervous exhaustion, anæmia, and any specific causes which broke down or injured the system?

3.

Have you seen any cases in which insanity or epilepsy either preceded or followed inebriety? If so, was it traced to the use of alcohol alone, or was it due in part, or in whole, to some inherited or acquired diathesis?

4.

Have you noted any distinction between the different forms of inebriety, such as irregular, continuous, or periodical inebriety? State any facts you have noticed which relate to the periods and forms of drinking.

5.

What particular mental and physical changes have you noticed concerning the character and general health of the inebriate, that would suggest the idea of disease and the need of physical care and treatment?

6.

Have you noticed any form or condition of inebriety that seems to be produced or is largely influenced by the kind of alcoholic drink used, or the work engaged in, or the food or climate, or any other unsanitary surroundings?

Illustrative cases concerning any of these inquiries will be welcome, and a full expression of opinion from observation and experience is urgently requested.

NECROLOGY.

LEWIS, MAGNUS MEWES, M.D., of Alexandria, Va., died at his residence in that city, on the 19th day of January, 1884. By this death, society has lost a gentleman, our profession an ornament, and the community in which he lived a citizen who, "take him for all in all, we shall not look upon his like again." He was the son of Dr. Robert Lewis, and his christian name was that of his mother's grandfather.

He was born in Jefferson county, Virginia (now West Virginia), on February 8, 1824. His academic studies were finished at the school of Benjamin Hallowell, so widely and favorably known as a teacher. Leaving Hallowell's, he studied medicine, and attended his first course of lectures at the University of Virginia. From this institution he went to the Jefferson Medical College in Philadelphia, where he was graduated in the spring of 1847. Shortly after graduating, he returned to Alexandria, and devoted himself to his profession. Rightly believing that no man, in this profession, without hard study, could rise above mediocrity, he applied himself closely to the acquisition of that knowledge which, in after years, he used with so much skill and judgment. For some time, his practice was amongst the very poor of our population.

> "In misery's darkest hovels known,
> His useful care was ever nigh;
> Where hopeless anguish poured his groan,
> And lonely want retired to die"

In return for the clinical experience thus acquired, as compensation for his work, their summons were never mocked by cold delay, but were answered with promptness and attended with care; but his talents and ability soon gained him a more lucrative practice.

When the war between the States broke out, he left his home with the 17th Virginia Infantry of the Confederate service, and while at Manassas Junction, Va., he was appointed Surgeon of that regiment. He was soon made Medical Director of Gen. Longstreet's Brigade, and was afterward Chief Surgeon of Pickett's Division. In each of these positions, he acquired additional reputation. What was the limit of his ability, I cannot say; it ever seemed to be superior to the occasion. After the surrender of Gen. Lee's army, he returned home, and showed his community that

> "A wise physician, skilled to heal,
> Was more than armies to the public weal."

It was not long before his growing reputation overshadowed his predecessors. Of his successful operations, I can now recall the following: Ovariotomy, amputation of the thigh for a large exostosis of the femur, removal of an immense fibro-cartilaginous tumor from the neck of a man 70 years old, tracheotomy for removal of a foreign body, excision of an encysted tumor of the throat, previously pronounced malignant, and unsuitable for surgical interference, by eminent surgeons, and a double synchronous amputation of the legs. Of Dr. Lewis it might be quoted:

"How he solicits heaven, himself only knows, but persons strangely visited, the mere despair of surgery, he cures."

His attitude to his professional brethren was one in which the gentleman and physician were ever blended. To that native dignity which so characterized him, and to that marked observance of etiquette so necessary in our profession, he united a rare unselfishness, which often prompted him to share the success and reward of his own operations with physicians younger and less deserving than himself. The loving confidence and loyalty of his patients was something of which any man might justly boast, and this was often his only recompense. In the eyes of his lady patients he stood, "like Saul amongst his brethren, much taller than the rest," and long will they hold in tender remembrance

> "The touch of a vanished hand,
> And the sound of a voice that is still."

He was a member of the Alexandria Medical Association, the Virginia State Medical Society, and of the American Medical Association, having been a delegate to the latter in 1858.

Some eighteen months ago Dr. Lewis first suspected the cause of certain cardiac troubles which affected him. This was Bright's Disease, in the form of contracted kidney. He sought the best medical advice of the country, but from none could he receive encouragement. His disease, unhappily, was too well marked to be mistaken; but, like a true man, he submitted to the inevitable, and bore with a fortitude almost sublime the sentence passed upon him.

> "Calmly he looked on either life, and *here*
> Saw nothing to regret, nor *there* to fear."

And thus he died, in the prime of life and the height of usefulness.

> "His life was gentle, and the elements
> So mixed in him that nature might stand up,
> And say to all the world,
> '*This was a man!*'"

R. C. Powell, M.D.

Alexandria, Va., February 6, 1884.

Mme. Broca offers a prize of 1,500 francs ($300), to be given by the Anthropological Society of Paris for the best memoir on a question concerning human anatomy, comparative anatomy or physiology, bearing on anthropology. The first prize will be awarded in April, 1884.

MISCELLANEOUS.

NEW BOOKS.

Physician's Visiting List for 1884. Philadelphia: P. Blakiston, Son & Co. $1.00.

Pratt, W. A Physician's Sermon to Young Men. New York: M. L. Holbrook. 25 cents.

Teale, T. P. Dangers to Health: Pictorial Guide to Domestic Sanitary Defects. 4th ed. New York: Appleton. 8vo. 19 to 172 pp. $3.00.

Warren, Jos. H. A Plea for the Cure of Rupture; or, The Pathology of the Subcutaneous Operation by Injection for the Cure of Hernia. Boston: James R. Osgood & Co. 12mo. $1 25.

Barnes, E. G. How to Arrest Infectious Diseases. 12mo. 84 pp. London: Churchill. 2s 6d.

Brooke, H. G. Washing and Bathing. 12mo. London: Heywood, 1d.

Browne, E. A. How to Use the Ophthalmoscope. 2nd ed. 8vo. 122 pp. London: Trübner. 3s 6d.

Duncan, J M. On Sterility in Woman. 8vo. 136 pp. London: Churchill. 6d.

Gowers, W. R. The Diagnosis of Diseases of the Spinal Cord. 3d ed. 8vo. 98 pp. 4s. 6d. London: Churchill.

Macpherson, J. Annals of Cholera from the Earliest Periods to the Year 1817. 8vo. London: Lewis. 7s. 6d.

Martindale, W. The Extra Pharmacopœia of Unofficial Drugs and Chemical and Pharmaceutical Preparations. 18mo. 322 pp. London: Lewis. 7s.

Power, H. Elements of Human Physiology. 12mo. 390 pp. London: Cassell. 6s.

Rivington, W. Rupture of the Urinary Bladder, Based on the Records of more than 300 Cases of the Affection. 8vo. 160 pp. London: Churchill. 5s. 6d.

Romanes, G J. Mental Evolution in Animals. With a Posthumous Essay on Instinct. 8vo. 410 pp. London: Paul. 12s.

Sanitary Regulation of Bakehouses 8vo. London: Knight. 4s. 6d.

Smedley, J. Practical Hydropathy. 16th ed. 12mo. London: Jas. Blackburn. 2s. 6d.

Smith, E. On the Wasting Diseases of Infants and Children. 4th ed. 8vs 390 pp. London: Churchill 8s. 6d.

Tosswell, L. H. The General Practitioner's Guide to Diseases and Injuries of the Eye and Eyelids. 12mo. 156 pp. London: Churchill. 2s. 6d.

White, A. H. Scott. Chemical Analysis for Schools and Science Classes, Qualitative, Inorganic. 12mo. 130 pp. London: T. Laurie. 2s.

Williams, K. W The Evolution of Morbid Germs. 8vo. London: Lewis. 3s. 6d.

Official List of Changes in the Stations and Duties of Officers Serving in the Medical Department United States Army, from February 9, 1884, to February 15, 1884.

To be Assistant Surgeon with the rank of First Lieutenant, to date December 3, 1883:

William D. Dietz, Walter W. A. Fisher, William Stephenson, Adrian S. Palhemur, John L. Phillips, Renben L. Robertson, William C. Borden, Edgar A. Mearns, Guy L. Edie, William D. Crosby, William L. Bundler, Charles M. Gandy, Charles S. Black, James E. Pilcher, Alonzo A. Chapin. (S. O., A. G. O., Washington, Feb. 11, 1884.)

Brewster, William B., First Lieutenant and Assistant Surgeon; resignation accepted, the date From Feb. 7, 1884. (S. O., A. G. O., Washington, Feb. 11, 1884.

Changes in the Medical Corps of the Navy for the Week Ending Feb. 16, 1884.

Medical Director S. F. Cones to the Naval Medical Examining Board, Philadelphia, March 3, as the relief of Medical Director P. J. Howitz, who retires on that date.

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ORIGINAL ARTICLES.

WHAT THE ANCIENTS KNEW CONCERNING OBSTETRICS AND GYNÆCOLOGY.

TRANSLATED FROM ÆTIUS BY G. M. B. MAUGHS, M.D., PROF. OF OBSTETRICS AND GYNÆCOLOGY, MISSOURI MEDICAL COLLEGE, ST. LOUIS.

Presented to the Section on Obstetrics and Gynæcology of American Medical Association, June, 1883.]

A short time since I was presented by my friend Dr. Dickinson with a Latin folio edition of all the extant works of the two most valuable Greek medical compilers, Oribasius and Ætius. The book itself is some 300 years old, and in a good state of preservation —never having been read,and though published only a little over 100 years after the invention of printing, could scarcely be excelled in mechanical execution at the present day. But any value that might be attached to this is utterly lost in the priceless value of its contents.

Oribasius, a learned Greek physician of the fourth century, was court physician to the Emperor Julian, and wrote his great work, the Hebdomekontabiblos or Seventy Volumes—a compilation of all that was known of medicine, at the order of Julian, who was as remarkable for his cultivation of letters as for his hatred of the Christian religion. He also wrote an abridgment for his son Eustathius, in nine books. Of the great work some twenty-five volumes have been preserved, together with all the abridgment in nine books. All of this is in my Latin edition, turned into Latin and dedicated to Cosmo Medici, Duke of Florence, by Dr. John Babtist Rasarius of Novarensus, in 1553. The work as preserved covers pretty fully the departments of materia medica, anatomy, and the practice of medicine and surgery, all of which contain many articles, instructive and well calculated to dissipate any inflated ideas we may entertain that wisdom began with us, and to inspire us with veneration for those great men who at this early age had placed the healing art abreast with the most advanced thought of the day.

In gynæcology there are many really valuable and accurate articles, such as Prolapsus Uteri, On Exciting the Menses, Fleur Albus, On Ulceration of the Uterus, etc.; but the compilation of the learned Oribasius, full and valuable as it is, was written amidst the hurry and excitement of court and camp, and lacks the fullness and accuracy of Ætius—the most learned, able, experienced and honest of all the Greek compilers, who practiced and wrote at Alexandria in the sixth century, at the time when the library in the Serapion contained at least a copy of all that was known in medicine and all other departments of human knowledge, while its dissecting rooms gave an accuracy in anatomy no where else to be obtained. And yet this great work has, I believe, never been published in any modern language, certainly it never has been in English. Had it been, it would have saved many learned assertions of modern authors concerning the knowledge of ancients, from publication.

I can not even guess why the Sydenham Society should have had the learned translator of the "Genuine Works of Hippocrates and the Extant Works of Ætius" also translate the comparatively worthless, incomplete and unreliable works of Paulus Ægineta, a Greek compiler of the seventh century, who, without ability or experience, certainly made his compillation without the aid of the Alexandrian library, and if he had any other works to compile from, than Oribasius and Ætius, certainly did not use them. A fact that leaves less regret, when we learn how bad a use he made of these, and yet this work is done in English possibly to show us how much the ancients knew of medicine, a purpose it utterly fails to accomplish. But even this would be of less consequence but for the fact that the learned translator, Dr. Adams, in his exhaustive commentaries on Paulus Ægineta, which have furnished the source from which much subsequent learned reference to the ancients has been derived—constantly does great injustice to Ætius, and thus to the world, frequently stating that Ætius agrees with his author, as though he had not lived a century before Paulus, who has stolen the article from Ætius. and through ignorance or desire to hide the real author, has done it so badly that the article has lost its value by the theft.

But scarce as are the works of Ætius, and little as they are read or quoted, they existed in the libraries of Europe, and as we shall see furnished the mine, the metals from which has been made the fortune of not a few discoveries. (?)

The works of Ætius in this edition, turned into Latin in 1512, by Dr. Janus Cornarius, Greek and Latin Professor at the Imperial city of Frankford, consist of his Tetrabiblus, or Four Books. Each book is divided into four sermons or discourses, each discourse consists of a great many chapters. The

last one of the Fourth Book of the Tetrabiblus is entitled "On the rationale of conception and parturition and diseases of women, especially those of the uterus and mamma; also of the preparation of most precious ointments, potions and perfumes." Surely, in reading this title page we might suppose the book was not of the seventh, but belonged to the nineteenth century. This fourth discourse of the Fourth Book consists of 112 chapters on Obstetrics and Gynæcology. It also begins, as all such works may be expected to, with a description of the uterus and its appendages, which we give:

"De uteri, situ, magnitudine ac forma, chap. 1.

On the situation, size and form of the uterus.

The uterus, Greek *metra*, this is called the matrix, because all life originates from it as from a mother. The same is called hystera, beause it is situated beneath all the viscera. For the uterus is placed within the peritoneal membrane lining the abdomen and all the intestinal convolutions, between the bladder and rectum, and lies upon this nearly its entire length, and upon the bladder to near the umbilicus, where is its fundus, for the most part mounting here above the bladder. But near the part stretching to the pudenda, the bladder extends beyond the uterus by its neck. Its size is not the same in all, for the uterus is much smaller in those who are not pregnant, but larger during pregnancy, but in those who have never been pregnant the uterus long continues even less, and until near puberty it is least in those who have not arrived at venereal desires, and is always smaller in those who have never had sexual intercourse.

And then the length of the uterus in women is ordinarily from near the umbilicus quite to the vagina, and is about eleven finger-breadths, but its width extends from either side between its horns. But whatever size it may attain, all that remains, the body, and more especially the fundus, is like a bladder. But in that it has nipples which spring up, produced from either side of the fundus and stretched to the loins, it is not like a bladder. These productions, which are called horns, tend at first upward, afterwards downward, and they are a little narrowed, so that their terminations are like veins; and these narrowed parts of the horns, as flexible tubes are carried to the ovaries, which are situated by either side of the uterus, by either side of the fundus near the cornua, and through these winding canals of the horns, in congress with the male the uterus draws the semen from the ovary. But the female testicles (ovaries) are small and not round, and oblong, and composed of tender flesh, as in the male, but broad and glandular and membranous. Moreover, the uterus is attached to the bladder and rectum by interstitial fibers, and attached to the sacrum by ligaments, which are strong, fibrous and muscular. There are ligaments and appendages which are inserted into the uterus, a part of which are interwoven and platted into the body of the uterus, not a small part of which are nerves originating from the spinal cord, but a part are incrementual and nutritive to the uterus itself, and made subservient to the fœtus. Such are the arteries and veins, for from the vena cava, which runs along the spine from the convex part of the liver, and from the great artery which lies upon it, two nerves and two arteries originate, indeed on either side a vein and an artery, and these four vessels are distributed to the uterus, but, before being inserted into this, give off branches to the ovaries, and afterwards are inserted into the body of the uterus and interwoven with its substance, and from these the menstrual blood in the uterus is derived. But there are other veins and arteries inserted into the uterus, a part of these are sent to the ovaries and a part extended to the neck. And, in fact, the body of the uterus consists of two membranes, an external, which is serous, and an internal, which is vascular; an external which is simple and one, but the internal is double; so that if we desired to peel it off there is seen to be two uteri (cavity of body and cervix) under one and the same membrane. Again, the neck of the uterus is muscular, and composed of hard and cartilaginous flesh, and always harder at its termination, and as time advances becomes cartilaginous, so much so in those who have had many children, and in old women, as as to resemble to the touch the upper part of the throat, and there is a meatus in the neck through which the menstrual blood is discharged and the woman receives the male semen, and through which the fœtus also passes, for, wonderful to relate, this opening is distended to so great a magnitude at this time. For the remainder of the time it is only sufficient to admit the point of a sound or a substance a little larger, and when the woman is pregnant it is closed so that it will not admit anything. But at the time when the fœtus is discharged from the womb the pains of parturition distend it to so great an extent that, wonderful to hear, the whole child passes through it. The neck ends and is terminated at the vagina or at the pudenda; moreover, the length of the vagina in women of mature age is about six finger breadths, nevertheless in labor and coitus it becomes shorter; doubtless in these states the neck of the uterus extends itself. During girlhood the vagina is soft and delicate, but in old women and in those who have had many children it becomes hard and like cartilage, because from the frequent congress and the forcible distention of labor it is hardened. It is also hardened by the presence of the menses, and not less by the abundant flow of acrid humors, by which hard ulcers and fistulæ are produced. And then at the time of menstruation the uterus is thickened and swollen, at other times it is thinner and contracted. It is also thicker and larger in those who have had many children, but thinner (smaller) in those who have never been pregnant.

It is also thickened from the first day of conception. But when the fœtus is developed, and during labor, it becomes thinnest, but thinned as a bladder becomes by being distended with air, its thickness being drawn out in its long diameter; and this much have we said as to the situation, size and shape of the uterus."

Commentary.—This remarkable description of the uterus is only wanting in our modern more distinct divisions of a subject and our more concise terms of

expression to give it a fitting place in a work on obstetrics and gynæcology of the eighteenth century. The author is not wanting in anatomical knowledge, but here, as in many other instances, the facts, though clearly known, are imperfectly communicated, for want of concise terms to express them.

The statement that the womb is called matrix because all life originates from it as from a mother, and that it is called hystera because placed under all the viscera, are facts worth stating and perhaps not known to all. The length of the uterus given is during pregnancy, and is true. The description of the oviducts and their uses left nothing for Fallopius to discover, this, together with his description of the uterine blood-vessels and their uses, of themselves, refute the assertion made and believed, that the ancients had no physiology. Now, how did Ætius know what modern science has so lately learned,—that the extremities of the Fallopian tubes were applied to the ovaries during ovarian orgasm, and that through them passes to the uterus from the ovaries whatever the female contributed to the reproduction of the species? and how did he know that the mouth of the uterus in the non-pregnant condition would only admit the point of a sound if they had no uterine sound, or only used it, as Dr. J. G. Simpson supposes, as a therapeutical agent? and how could he know that during pregnancy the canal was closed against even this? or that the uterus was succulent and thickened during menstruation? or that it beeame intumescent from the first day of conception? Such knowledge is in advance of that at the beginning of the nineteenth century, and proves conclusively that he possessed a vast fund of accurate anatomical and physiological knowledge not given here, not given because not compatible with the nature and subject of the chapter. After reading this description we suppose no one will again assert that the ancients did not know or did not discriminate the os uteri from the vagina! Surely Ætius did not suppose that the os vaginæ of a woman bearing children would only admit the point of a sound, and that after conception it would not admit even this?

"On the assistance that should be given those in whom conception is hazardous.

"Some women when they conceive are endangered in parturition, either from the smallness of the uterus, so that the fœtus cannot escape from it, or from narrowness of its neck, or because a tumor (polypus) or some such like substance is developed within its entrance, which complicates the labor, and certainly such are best served, if they are entirely guarded against parturition; and should they conceive, it is safer to probuce an abortion than to dissect and remove the fœtus at term. For these reasons we must proceed from the order of destroying the fœtus, to that of producing sterility. For that which induces sterility, differs from that which destroys the child, for it prevents conception, this done it kills and expels it. Therefore as a woman must not conceive she must first take heed not to have intercourse with the male at the time when conception is most likely to take place, namely, at the beginning and termination of the menstrual flow, and then in the act of coitus when the male semen is being ejected she must hold her breath, that the semen may not be carried within the uterine cavity, and immediately rise up and placing herself upon her knees provoke sneezing, and carefully wipe the pudenda. To prevent conception also the mouth of the womb may be smeared over with honey, or with opobalsom, or with cedar oil, either by itself, or mixed with white lead. In like manner she may use white lead mixed with liquid myrtle cerate or with alum water, or galbano with wine, also of a like nature are cold and astringents applied to the meatus, just before coitus, as they close the mouth of the uterus and prevent the semen penetrating within its cavity. But also the excitation of heat not only drives the semen of the male from the uterus, but draws and extracts the remainder of the tumors. But those things which follow prevent conception and induce sterility."

Commentary.—Here follows in the next chapter a long text of very efficient suppositories, washes and drinks for the prevention of conception, by which we are assured that the women of ancient Greece and Rome were often as anxious to escape conception as are some of those of New York and St. Louis, and also that they were provided with perhaps quite as efficient means as are those of the present day. Again in the next chapter, "On the Production of Abortion," which is credited to Asparia (by the way, there never was a female writer on midwifery by this name), shows that this accursed art had been brought to great perfection 2,000 years ago, and if less efficient than some of those of the present day, it was only because less dangerous.

"Pariendi difficultatis causæ.

"On the causes of difficult labor."

"Difficult labor happens from various causes, from that which affects the body or the mind of the puerpura, or from weakness of both at the same time; either from smallness of the uterus, or because of narrowness of the meatus, also those who, on account of age or shortness of stature generally have the uterus corresponding with the rest of the body. It is possible for difficult parturition to arise either from obliquity of the neck of the uterus, or from the growth of flesh (polypus) to the neck of the same, or from its mouth, or from inflammation, or disease or induration of the same parts, or because the fœtus cannot rupture its surrounding membranes, or because the water collected in the uterus is discharged prematurely, and at the time of labor the parts being without the water, are dry; for the waters are of the greatest service at this time, as they give easy passage to the child. Or because the puerpera has a stone in the bladder, which by compressing the neck of the uterus renders labor difficult, or it may be caused by grossness or fatness of the pregnant woman. Also, the labor may be rendered difficult by the two compact union of the pubic bones, so that they cannot dilate during labor; for the pubic bones in women are not connected as in men, alternately (serrated suleres), but are jointed by strong ligaments. The same difficulty in parturition is caused by a too great cavity of the loins (promontory of sacrum) compressing the uterus, or from the great quantity of excre-

ments retained in the rectum or bladder. Sometimes, also, the parturient patient is debilitated from age. Others begin to bear down during the first stage of labor, through ignorance, or on account of inexperience of how properly to prepare the body, or because they have not yet attained the age or strength of wo manhood, but to this time have remained as girls. Difficult labor may be produced when all or a part of the child is of extraordinary size, or the head or the thorax, or the abdomen is of undue proportion; or when the fœtus, from weakness, is not able by its leaps and movements to assist its mother; or when there are two or three children, or when twins advance and both suddenly engage in the neck of the uterus together; or when the fœtus, having perished, can give no assistance in the labor, or when being dead it is swollen; or lies præternatural, for the position of the presenting fœtus is natural when it advances so that its head is straight, with the hands extended upon either thigh, but præternatural when the head is turned to either the right or left side of the uterus, or when one or both hands is prolapsed and the legs are separated from each other. Yet less is predicted of the rest of the form in those which present by the feet, especially if they advance with a hand extended upon either thigh. But the fœtus which presents with one foot prolapsed, while the other is detained within the uterus, or doubled up resting upon some part of the uterus, requires correction, just as do those who have the hand extended. Those which present obliquely are less objectionable, and this may happen in three ways, for either one or the other side of the fœtus presents or the belly; but the presentation of the side is easiest, for then the midwife, by introducing her hand, straightens either the feet or the head of the child. And then those that present double are in the worst position, more especially if the presentation is by the pelvis. But there are three ways in which they may be doubled, for either the head and legs, or the abdomen may be in the mouth of the womb; but it is preferable for it to be on the abdomen, for these are dissected by us, and after removing the internal parts the pieces come down and the shape is readily changed.

"In like manner parturition may become difficult if the membranes, either because of their thickness do not break, or because of their thinness rupture too soon; moreover, difficult labor may arise from external causes, for the meatus may be contracted if the season of the year is cold and stormy, or it may be relaxed by the heat of summer. All of these difficulties occurring to women in labor, it behoves the physician to inquire of the midwife, and not rashly to resort to surgery, nor should the midwife be permitted to continue to dilate the uterus for any undue length of time. If therefore the labor is rendered difficult by the lumbar cavity (projecting sacral promontory), the patient should be placed in a chair, with the knees bent forward, that the uterus may lie within its neck straight; the fat and fleshy are placed in the same manner. But if the difficulty is because ot some narrowing or stupor, or contraction, assistance must be given by laxative warm hip baths or fumigation, such also as a warm room, and inserting of both actual and potential warm oil (pungent oils or those warmed), and also by the application of ointment and poultices of the same property. Relaxation may also be produced by baths, and, if not forbidden by fever or some other cause, by carrying the bed of the patient into a warm room. Some have also advised strong shaking in this condition. But for those who are prostrated by weakness in their labor, we must produce firmness by strengthening, condensing, and more especially astringent remedies, such as sprinkling them, and the use of hip baths of decoctions of myrtle, vine leaves, or roses, or aromatic decoctions with vinegar, and ointments from wine and rose oil cold. But if the difficult labor is caused by the preternatural form of the fœtus itself, it must be reduced to the natural conditions by such means as we are able to use, but if a foot or hand present, we must not draw upon it, as the greater impaction would be produced thereby, or it might be even dislocated or broken, but with a finger under the shoulder or thigh we change the position of the fœtus and bring down the presentation in a more favorable manner. But if at the same time with contraction, the entire condition of the fœtus is unfavorable, it is first lifted up from the os to the upper part of the womb, and afterward it is brought down again to the mouth of the womb straight, and that this may be done gently, safely, and without contusion, constant anointing the parts with oil must be observed, for upon this depends the safety of the child and the mother, and the uterus also remains uninjured. And if the mouth of the uterus remains closed, it must be softened and relaxed by fat ointments. But if the difficulty should be on account of a stone in the bladder, we must push this out of the neck of the bladder with a catheter—and if the bladder is distended with urine, it must be emptied with a catheter, and if the rectum should be loaded with excrements, they must be removed by a clyster; and if the woman should not be able to accomplish her delivery by reason of inflammation, or abscess, or ulcer, loose tumor (fibroid) or induration, she must be relieved from each of these by suitable treatment. But if the labor should become difficult by the springing up of flesh (polypus) in the neck of the uterus, or from some kind of congenital solidity of the membranes, as happens in imperforate women, whatever may be the nature of such impediment, we must cut it away; and if from the membranes surrounding the fœtus being too solid, so that is not able to rupture them, they must be cut open. But when from the too early discharge of the waters, by which the parts, at the time of labor, are left dry, we must inject into the vagina the white of eggs, with decoctions of mallows, or warm barley water, and if smallness of the uterus is the cause of the difficulty, the parts must be anointed with some kind of fat, also fomentations must be used, and the os uteri dilated with the finger, and the fœtus forcibly extracted; but if not successful in this, it must be dissected. This is done more especially when the fœtus is too large or dead. That the fœtus is dead we may know by the cessation of movements and from its appearing cold to the touch. And if there are twins or triplets obstructing the mouth of the uterus, we should lift the

others to the fundus of the uterus, and first deliver that one which appears nearest delivered. But if the difficult labor is caused by the great size of the head or thorax, or belly, all that is necessary is to open these. Moreover, the time for placing the woman in chair is when the mouth of the womb is open to the touch, and the membranes ready to rupture."

Commentary.—This long and interesting chapter is taken from Philumenus, a distinguished surgeon and gynæcologist of the 2d century. The next chapter, "On the Dissection and Extraction of the Fœtus," is credited to Philumenus, and constantly repeats the directions in this, showing conclusively that this is from the same author. We are then given here, not the opinions and practice of Ætius of the 6th century, but carried back to the state of obstetrical knowledge some 1,800 years ago. While some of the statements of the author are obscure or fanciful, particularly as to the position of the fœtus, which they really did not understand—and even Ambrose Pare candidly admitted that, though he had labored to determine, he did not know what was the natural position of the fœtus—yet it is exhaustive in the relation of actual causes of difficult labor, and fertile in his resources in removal of the difficulty, so much so that all Europe could not have duplicated this chapter in better the days of Smellie.

The causes of difficult labor are very properly stated to be dependent upon pathological states of the mother or that of the child. Of the mother the causes may be either physical or mental, and this is true. Of the pathological conditions of the mother he relates, smallness of the uterus (hypothetical) narrowness of the os (rigidity), smallness of stature (true), age, either too old or too young (true), obliquity of the uterus (beautifully true), the growth of flesh in the neck or os (polypus or fibrous tumor, true), inflammatory states (true), because cannot rupture the membranes (firmness of membranes cause delay), too early discharge of water, (true in fact, and why?), stone in bladder (true), too fat, too fleshy (true), anchylosis of pubic bones, (true), projecting sacral promontory (true), loaded rectum or bladder (true), bearing down in first stage (true), excessive fœtal development (true), multiple pregnancy (true), locking of twins (true), dead and intumescent fœtus(true), praeternatural positions (true), head bent upon neck (true). The means indicated for meeting these various causes of difficult labor, either caused by mother or child are often just such as a scientific obstetrician should give at the present day. The time for placing the woman in the chair is just that which we observe at the present time—to do so previous to this time would be to unnecessarily confine the patient, to defer it longer would be hazardous.

The too firm union of the pelvic bones so that they cannot dilate, or separate, is a question we are yet discussing. I, however, fully agree with Philumenus.

"Cancri Chirurgia. Leonidæ."

"On the surgical treatment of cancer, by Leonides.

"In the treatment of those cancers that arise upon the breast I (says Leonides), rely entirely upon surgery, which is done thus: "I make the patient lie upon her back, then I cut upon the sound part of the breast, above the cancer, and burn in the incision with a red hot iron until a crust is formed sufficient to arrest the flow of blood; I immediately incise again and dissect up from the deepest part of the mammæ, and again burn the incised parts, and after this I repeat the cutting following it with the red hot iron sufficient to arrest the hæmorrhage. The first burning is for the arrest of the hæmorrhage, but afterwards the burning is for the removal of every vestige of diseased tissue. But often also when the indurated cancerous tumor is situated less deep in the breast, the entire operation is performed without the cautery, for in such cases it is sufficient to amputate to the sound parts, as there is no danger from hæmorrhage.

Commentary.—This chapter on the surgical treatment of cancer of the breast, follows that description of cancer of the breast by the two great gynæcologists of the first century, Archigines and Leonides, and shows that with all our boasted knowledge we have not improved upon the skill of these immortal surgeons of 1,800 years ago. Indeed, the operation here given is better than the more artistic one of the present day, and with chloroform it might be relieved of the hideous suffering then inflicted. But in operating for cancer, as life or death hangs upon the perfection of the removal of the disease—even this is of but little moment. Some may ask, Why did they not apply ligatures to the bleeding vessels instead of burning, for the arrest of hæmorrhages? This would be answered with the statement that the ligature is of modern invention or discovery, for which we are indebted to the genius of Ambrose Pare. This is not true, as these surgeons were just as familiar with the use of the ligature to bleeding vessels as Dr. Gross or Billroth; and if any surgeons from the days of Galen, second century, to that of Ambrose Pare were ignorant of them, it was because they had not done what Pare did, read the ancients. *En passant*, we may say that Hunter discovered how to cure aneurism from Ætius. They did not apply the ligature, because the theory was that cancer was caused by black blood, and this should be permitted to run out to as great an extent as might be compatible with the safety of the patient; while, therefore, the first burning was for the arrest of the hæmorrhage, the last was for the removal of any vestige of the disease—vestiges which so constantly escape the eye and knife in our artistic operation, that one of our distinguished surgeons has nearly ceased to advise operation in this disease.

"De reclinatione, aversione æ recursu uteri Aspasia.

"On lateroversion, anteversion, and retroversion of the uterus, by Aspasia.

"In suppression of the menses, from necessity, there is repletion of the veins and arteries tending to the uterus; for the blood which runs quite to the mouths of the vessels, but is not able to pass into the uterine tissue, either because from its too great thickness it impinges against their mouths and coagulates, or because the mouths themselves are closed and their passage obstructed so that the veins, filled with fluid, are distended, and the appendages in the vicinity of

the uterus are swollen, by which distension the uterus is withdrawn; and if the drawing is equal from both sides, the lateroversion or retroversion of the uterus is equal (no displacement), but if the traction is made greater in one part than another, as is caused by the viscera, namely—the liver or the spleen, the distended veins of which overflowing with blood, draw the uterus from these parts, the veins of the liver from the right, those of the spleen from the left, as either may be more full. But to whatever part the uterus is inclined, we may know by touching with the finger and by the following signs. For if it is inclined obliquely, distension, pain, coldness, impediment, and numbness of the near thigh will disclose it; sometimes also dryness of the same groin, followed by weakness in resting upon that limb, and difficult locomotion. But if it is inclined backward (retroverted or retroflexed), or downward (prolapsed), motion of either leg is followed by numbness and difficulty. Often like movements well nigh intercepted, and violent pains harrass the patient; the bowel is likewise constipated, nor does it admit an enema unless the patient is placed upon her knees. The flatus is also retained, and pains are excited at the anus, especially if the displacement is against the anus (retroflexion); and if it is turned to the pubis (anteverted), the hypochondrium and pubis are distended, and pains invade the same parts; likewise, sometimes the urine is retained in this form of displacement. Therefore, in whatever manner the uterus shall have been displaced, it ought to be treated during the exacerbation in the same manner as inflammation. But in the remission and decline of the disease a more mild treatment may be used, but with the disease persevering we must use such things as have the property of drawing from above (cathartics), and of changing the habit of the body (alteratives), and indeed we should treat displacement against the anus (retroversion) thus: First, we should direct the midwife to lift up the uterus by introducing her finger into the anus; then she may place in the anus a suppository four fingerbreadths in length, prepared from galbanum and wax, and to the extremity of which a thread has been attached, for its more ready removal; or wool with castor diluted with water, or dry bitumen, or liquid pitch may be used in a similar manner. But on the following day tepid oil of irini or lilies may be thrown into the vagina and rectum, and the parts should be fomented with some aromatic decoctions, either horehound or fleabone, and the vagina may be washed with the same; afterwards rose cerate may be used. But if the drawing back inclines obliquely (retroflexed), first the same fomentations may be used; then the midwife, with a sound introduced with the finger, straightens the neck of the uterus; the patient is then placed in the supine position, or on the opposite side to the one affected. Moreover, a mild and aperient suppository may be used, and some of the formerly named oils should be thrown into the vagina, and washed with wine and rose oil, or flaxseed emulsion prepared with wax should be placed upon the pubis, and we may give to drink musk, anise or cumen or nigella, peonyroot or gentian or myrrh, or carrot seed, or heartworth, or elecampane from vinegar and honey. Likewise the same may be done in violent attacks of pains in the uterus, not each single and by itself, but also united together. Also, the woman should be laid with her head elevated; and if the uterus, after being properly replaced, is again drawn back, some fetid substance should be immediately placed to the nose and sneezing excited. And if the urine is retained, it should be drawn off with a catheter. And if the paroxysm should be relieved by this, there is quiet. Again, for the exacerbation of the disease, if the patient is young and plethoric we may consider the propriety of extracting blood from the arm. We may then give emmenagogue drinks and use the milder pessaries.

Commentary.—This remarkable chapter proves conclusively that the ancients not only recognized the diifferent kinds of uterine displacements, but were scarcely less apt than ourselves in remedying them, only wanting permanent supports that have become so fashionable among modern gynæcologists, to render their treatment as efficient as that of the present day. But if they were wanting in the pessary mania of the present day, whereby each and every local operator, through some lucky twist or screw of some strange device, called uterine support, hopes to attain immortality—their patients were gainers. They also, as is seen, used the uterine sound for displacement as we do. And yet the uterine sound is a modern invention? Nothing equal to this chapter was again written for more than 1,500 years.

The directions given to the midwife to do this or that prove that it was not written by a midwife, but by a physician, most probably about the time of Hippocrates, when Aspasia, the celebrated mistress of Pericles, had made the name famous.

"*De uteri abscessus Archigenis.*"

"On uterine (pelvic) abscess, by Archigenes."

"The formation of an abscess in the uterus, as in other parts of the body, is preceded by inflammation. First, therefore, the signs of inflammation are apparent, then, about the time the pus is formed, the pains are increased and a fever with rigors, most violent in the evening, a tumor is developed, and the pains become more pungent; sometimes the urine and sometimes the fæces are retained, or both at the same time, but the seat of the pain will indicate the locality of the affection. Therefore, if it is not possible to discuss it, we must use such treatment as hastens suppuration. For this purpose we apply flaxseed meal, boiled figs, althæ root and turpentine made into a poultice. These poultices are applied to the hypochondrium and loins, while the vagina is constantly fomented by means of a sponge and vapors, by means of a reed inserted in a perforated covered vessel and carried into the vagina. Frequent hip baths should be used, composed of decoctions of such things as have drawing properties, such as pennyroyal, horehound, laurel sage, wormwood, dittany or centuary, but in cases where the patient is afflicted with more violent pain, we should apply poppy heads boiled, bruised, and made into a poultice, also raw figs rubbed up in a mortar with pine resin, turpentine, and a portion of niter may be applied. We may also use a suppository prepared thus: ℞ The fleshy pulp of figs, goose grease, oil of irini

aa℥ij; turpentine, ℥jss; rue, ℥jij; ungunt iridis nitri, aa℥iv; raisins may be substituted for the figs. Wool may be made into a pessary, dipped in warm oil of irini or cypress and introduced into the vagina; but the most efficient remedy for this purpose is a composition called Cyphoides, and previously described when treating of abscess of the liver, and likewise enneapharmacum, a preparation used for indurations, also poultices of goldcup and other substances of a like nature, also pessaries may be placed in the vagina saturated with oil of lilies or telis. Likewise the lower abdomen and pubis should be constantly fomented with some select decoction. Should the abscess break, if the pus escapes into the bladder, and is discharged with the urine, milk drinks and cucumber seed decoctions are prescribed, and cataplasms are used, composed of fragrant emollient substances. But if the pus passes into the rectum, and is discharged with the fæces, or by itself, we must throw up the bowels enemas of decoctions of pomegranate rind or mastich, but if it breaks into the vagina and the pus is laudable, injections of rose oil or tetrapharmacum with fresh butter and rose oil may be used, and the parts washed with decoctions of roses or mastich. But if a thin and fetid ichor like that from noma or phagedenic ulcer is discharged, more astringent injections must be used, such as are the decoctions of myrtle berries, palm, mastich and pomegranate rind. Moreover, if after the discharge of the humor, the inflammation should continue, we must persevere also in the use of the poultices and hip baths formerly described, and if the matter discharged is unequal, fomentations and hip baths of decoctions of horehound, vetches or mastich must be used, but the parts must be washed with barley water, with honey and rose oil added; at the same time the os uteri and anus should be anointed with rose cerate or butter, to which is added some dross of tin or lead, or foam of silver (lithrage), which may be mixed with breast milk, also lead water may be used. But if the discharge should become very offensive, the vagina should be washed out with wine and honey, and we must continue in the use of these until the cure is perfected.

"*Abscessus oris uteri chirugia.*

"On the surgical treatment of abscesses of the womb (pelvic abscess).

"If the abscess is situated about the mouth of the womb, so that surgical treatment can be used, we should not be in haste to open it too early, but wait until the disease is perfected by the greater increase of the inflammation, whereby the parts containing the pus are thinned. And then the woman is placed supine in a chair, with her legs drawn up upon the abdomen and her thighs separated, with her arms brought down under the legs and properly secured by a cord passing over her neck; she is then placed before a clear light, when the surgeon, seated by her right side, separates the pudenda with a speculum (dioptra) suited to the age of the patient, and makes an examination, and with a sound measures the length of the vagina so that he may not compress the uterus with the stem of a speculum longer than the vagina. And if it is found that the stem is greater than the vagina, rolls of wool should be placed upon the labia or sides of the pudenda, so that the speculum itself is made firmer. The stem should be introduced with the screw turned to the upper part; then, while the surgeon holds the speculum, the screw is turned by an assistant, so that by separating the blades the vagina is distended. When the abscess is exposed, if it is thin or soft to the touch, its apex should be opened with a scalpel or lancet, and after the pus is discharged a thin piece of lint dipped in rose oil is placed in the incision, or rather without the incision, in the vagina, without compression, but outside the labia pudenda, to the pubis and loins, washed wool, clean or saturated with oil, is placed. Then, on the third day, the patient is seated in a hip bath of warm water and oil, or a decoction of mallows, and having cleaned the parts, we introduce gently into the fissure of the incision lint spread with tetrapharmacum, either by itself or mixed with honey, but the tetrapharmacum should be diluted with butter or rose oil, and a poultice is kept applied externally until the abscess is free from inflammation or discharge. But, if there is difficulty in cleansing it, it may be washed by means of an ear syringe with decoction of iridis, and an ointment prepared from calomine or lardano, or burnt barley diluted with rose oil may be used until cicatrization is perfected. But if the abscess is within the uterus surgical treatment must not be resorted to, but the treatment previously related is to be pursued.

Commentary.—These excellent chapters on pelvic abscess by the distinguished gynæcologist of the first century, Archigenes, would do credit to any author now living, and for excellence of treatment, both medical and surgical, require no improvement. First, the accurate description of the nature, symptoms, and termination of the disease is followed by the medical treatment with poultices, fomentations, fumigations, and injections with wine, oil and water, into the vagina and rectum, with hip baths, astringent and antiseptic washes, with an accurate description of the most common discharge of the pus—into the bladder, into the rectum, and into the vagina—with a most appropriate treatment for each of these conditions, varied according to the various conditions of the abscess and its discharges. First, the surgical treatment, which opens with an aphorism that should be remembered, that the cure is not facilitated by too prompt a resort to surgery, but that we should wait for the abscess to become perfected, when it should be opened with a scalpel or lancet, and lint smeared with rose cerate introduced into the incision. The parts kept clean with injections by means of an ear syringe and aromatic and astringent washes. I candidly confess I could not improve upon the treatment. The next chapter treats of those cases where the abscess breaks into the abdominal cavity, which leaves nothing to be discovered by later researches. But what is of perhaps the greatest interest, and the one to which we wish to call especial attention, is the mention of the dioptra or speculum vaginæ, and the uses of the uterine sound as a diagnostic means, and while not intending to describe an instrument in common use, and with which he evidently supposed every one familiar—yet in his description of the

manner of using it, he has done so so clearly as to leave no tears for the arduous labors of Racemier and other modern geniuses in discovering or inventing it, while the uses made of the sound in this and other instances greatly lessen the labors of Sir J. Y. Simpson in learning how to apply it. To show the great ignorance even now prevailing as to the history of the speculum vaginæ, perhaps no better instances could be given than the statement of the learned Professor of Obstetrics at Glasgow, in the last edition of his most excellent work on midwifery, that the first indication of the speculum vaginæ is given by Ætius in a chapter, "De Fœtus Exsectione ac Extractione," which he takes from Philumenus. Now, there is no mention made of the dioptra in this chapter, and the instrument used for separating the external parts were, doubtless, just such as we use at the present day for a like purpose—bent spatulæ. It is but fair to Professor Lieshman to state that he does not say the speculum was used here, but first indicated; by which we are evidently to understand that the instrument itself was not yet known. Philumenus was, we believe, a writer of the second century; while the speculum was, as we have seen, not only indicated but of common use in the first century—no doubt, centuries earlier.

"De uteri obturatione.

"On obturation of the uterus.

"Obstruction about the mouth or neck of the womb may be either because of previous ulceration or from inflammatory induration by which the places are so greatly narrowed that they do not sufficiently admit the semen, or this being admitted is not retained, for from the callous hardness the uterus cannot contract; sometimes, however, the semen being admitted and retained within the narrowed os, a fœtus is begotten, but such conception becomes the cause of the pregnant woman's death, as from the extensive narrowing of the places the fœtus can not escape. For this condition hip baths of oil and water and decoctions of fœnugreek are administered, and the parts relaxed by cerates and emollient pessaries, prepared from œsypus, turpentine and niter. And when the parts are soft to the touch we should, for its sufficient dilatation, introduce a sponge tent (spongiam siccam) with a thread attached, and when this is removed, we may introduce a larger one, and for this reason it behooves us to have prepared many and different sized sponge tents. We should smear over the sponge tents with the following ointment: ℞ Red orpiment, dry alum aa℥j; yellow orpiment ℥ij; rub all up with honey and paint over the sponge tents before inserting. Wherefore if it is seen that the distension of the sponge tent has not sufficiently opened the place and inflammation has been produced, the tents may be covered with the following ointment: ℞ Iridis ℥ij: goose grease, turpentine, frankincense, oil of irini, wax, aa℥j; first the iridis, then the frankincense must be reduced to a fine powder, and then sifted; then the turpentine, goose grease, and wax with the liquid oil are added and all united together; then when the inflammation has subsided and the place is open the sponges may be covered with cerate, prepared from rose oil and goose grease. The use of which is continued until the parts are cicatrized, and the places made somewhat firm.

Commentary.—This chapter and the following one on imperforate uterus, is also from the distinguished gynæcologist Archigenes of the first century, and both the causes, narrowing from inflammatory induration and ulceration; and the effects, sterility, just such as are met with and given at the present day, while the treatment is just such as is daily practiced without improvement, while the display of this surgeon's gynæocological bag, with its marvelously perfect and varied sponge tents with strings attached for their more ready removal, is calculated to gladden us, at the same time to humble our vanity, that we have just now arrived at a point where he left off 1,800 years ago. Sponge tents in great quantities and of different sizes—and when the dilatation of one failed to open the part sufficiently, the introduction of a thicker one, and when by persistence in their use inflammation was excited, antiseptic preparations until inflammation has subsided, is just what we are now doing, and yet sponge tents are of modern origin, and owe their invention to the fecund brain of Sir J. Y. Simpson. How could such knowledge have been forgotten? Of course Simpson learned their use from the very chapters I am now quoting.

"De utera non perforato.

"On imperforation of the genital canal.

"Some women have by nature, (congenital), an imperfect genital canal; of this there are three kinds, for in some the obstruction is from a membrane or flesh springing up within the pudenda itself, or from the sides of the labia; in others it is in the vagina; in others the same obstruction is about the mouth of the uterus itself. Wherefore, to cure those in whom the membrane exists in the labia pudenda, we place them in the supine position, with their legs properly placed and their thighs separated, and dissect out the obstructing membrane with a scalpel until the shape of the pudenda has attained natural dimensions; after this we fill the divided section with a roll of lint, and fasten it there, then for the cure of the suppuration, we first apply poultices for several days, then we use lint saturated with rose cerate, and if, after the division, we discover the sides of the pudenda to be united by their fleshy parts, we break them up again, and dilate them by lint tents, and use the same treatment as before. The woman, after the operation, is placed upon her back with a pillow between her thighs until cicatrization is completed, but if while the external parts of the pudenda are open, the vagina is obstructed by the development of flesh in the place, so as to leave only a narrow opening, the woman being placed in the same position, we introduce a sound into the neck of the uterus for greater safety, that we may not through error, make the section too high, and thus we dissect within the places indicated by the sound, with a broad spatula, until it is seen that the vagina is according to nature, then the dissected sides of the flesh being distended with a vulsella, we cut around to a quadrangular shape. We then stand the woman upright that the fluids collected in the vagina may readily flow away. But when

this has been done sufficiently the patient is placed back in bed, as in the first position. We then place in the divided section a roll of lint wet with wine and oil, and to the extremity of which a thread is attached for its more ready removal, then, having properly bandaged the parts, we enjoin quiet; then on the following day we wash the parts with oil and honey, and a roll of lint dipped in medicine for suppuration is placed in the vagina, and when the parts are cicatrized a tin tube is introduced and secured in place until the parts are firm; but if the parts again unite together, so that the os uteri is again closed, I introduce a sponge tent until hardness has been induced; but if the membrane obstructs the mouth of the uterus itself, the woman being placed in the same position, and the vagina distended by, the the introduction of a speculum, the membrane is seized by a vulsella and extended and twisted until it is all bound together in a cord, when it is cut off with a broad spatula, and sprinkled over with a preparation of dry flowers, and a roll of lint wrapped with a thread is introduced and the same treatment pursued as heretofore given. When any of the membrane may have been left, the cure may be completed with flowers, or with a medicine called psaro. For cleansing the parts lint dipped in this preparation may be used: wax, turpentine, goose grease, aa℥ij, iridis, frankinsence, aa℥j, saffron ℥iij, oil of irinis ℥xvj; rub up the iridum, saffron and frankincense with a pestle and mix with the liquids until liquified. But the speculum must be constantly used and the cavity not permitted to fill up with granulations, which the following preparation will prevent: ℞ Scales of copper rust, rust of copper, frankincense bark, aa℥ij, ground up, united and used; or copper rust and scales with lead water, may be mixed and used. But the use of sponge tents must not be omitted till hardness of the sides has been induced, also the introduction of the tin tube is to be continued.

Commentary.—Again this chapter from Ætius is evidently from the Marion Sims of ancient gynæcologists, and is manifestly only a fragment of a "Treatise on Operations upon the Vagina, by Archigenes." The first obstruction is an obturator hymen, which is properly treated; the next is an imperfect vagina in which Amussat's operation for the formation of an artificial vagina is anticipated by 1,800 years. The difficulties of preventing the parts again uniting and the canal again coutracting, are fully appreciated and very properly treated. Sims' vaginal dilator is used. It is thus seen that there is nothing new under the sun, and we, with all our boasted knowledge, are only now approaching the wonderful gynæcological knowledge of the ancients.

Dr. Willard Parker is eighty-three years old; Alonzo Clark, eighty; A. C. Post, seventy-seven; Isaac E. Taylor and Austin Flint, seventy-one, and Frank H. Hamilton, seventy. Some of these distinguished medical men are still in active practice, notwithstanding their great age.—*The Cincinnati Lancet and Clinic.*

MORPHIA AND ATROPIA BY HYPODERMIC INJECTION PREVIOUS TO THE ADMINISTRATION OF ANÆSTHETICS.

BY J. C. REEVE, M.D., DAYTON, OHIO.

The number of this journal for February 9, contains an article upon the above subject by Dr. Aubert, from the proceedings of the *Société de Biologie*, in which the modification of the action of anæsthetics by preceding injection of narcotics, seems to be presented as something entirely new, and his experience of the benefits resulting from it is detailed as if nothing similar had been heretofore given to the profession. The fact is that this mode of modifying anæthesia is more than twenty years old. It had its clinical birth under Nussbaum in 1863, and owes its establishment upon a scientific basis to Bernard shortly afterwards.[1] Since then it has been gradually making its way in practice. Its merits have been several times presented and urged upon the profession of this country by myself. First, in an article in the *American Journal of the Medical Sciences* for April, 1876; again in a paper read before the State Medical Society of Ohio, in 1878, and more lately, but very briefly, in the American edition of Holmes' Surgery (Vol, III. p. 556).

But the object of this article is not to claim credit for any merit in promulgating the doctrine of "mixed anæsthesia," rather to again direct the attention of the profession to it and to again urge its claims to confidence as a sure method of lessening the dangers of anæsthesia and of facilitating the administration of anæsthetics. I am impelled by the conviction that the method is not as generally known or resorted to as it deserves to be, a conviction strenthened by the appearance in a leading journal of such an article as M. Aubert's without any editorial allusion to the large amount done in the same line in this country and elsewhere.

In the papers above mentioned the theoretical arguments in favor of the method were presented, some interesting comparative cases detailed, and considerable clinical experience given. Theoretically, the arguments in its favor are the fact that atropia is a powerful stimulant to the cardiac and respiratory functions, as taught and demonstrated by Harley and Bartholow; and the obtunding and soporific influence of morphia, which lessens both physical and psychical excitement, and brings the patient to the verge of sleep before any anæsthetic vapor is inhaled. Clinically, the experience in favor of the method is quite large. My own extends far beyond that of Dr. Aubert, sixty cases. I have used it now for more than ten years whenever required, for operations of every kind severe enough to demand it, in patients of all ages. I have not in a single case found occasion to regret having resorted to it, nor seen a single bad symptom which could be attributed to it.

Desiring to be as brief as possible, I will first touch

[1] Lecons sur les Anæsthetiques et sur l'Asphixie.

on the leading points relating to anæsthesia by this method:

Safety.—This rests on the sound basis of the physiological action of medicines and on clinical experience. When it comes to speak in relative terms of the *greater* safety of this method, of course the vast experience upon which to base such a claim is wanting. Too often we see relative advantages claimed for some particular method of administering anæsthetics, based on the experience of a single administrator. Such a claim, viewed in the light of the rarity of accidents, and the widely varying experience of hospitals and armies, in which there have been large numbers of administrations, is simply ridiculous. There is one clinical point, however, to be urged in favor of this method, in regard to which there cannot be, I think, any question. It is its efficiency in lessening emotional excitement. Few of us, under the influence of almost daily use of anæsthetics, realize the momentous aspect the process assumes to the patient, especially to a nervous and impressionable female. Is not a feeble and depressed pulse a constant phenomenon at the beginning of the administration? and does it not gradually rise in force and volume as consciousness fades? The contrast, when a hypodermic injection has preceded, has been, under my observation, striking. There can be no question that deaths have occurred under anæsthetics from purely psychical causes, just as the patient shrieked and died when the surgeon drew his finger nail along the perinæum, to show the class where he would make the first incision in lithotomy. No more powerful means are at our command for allaying undue apprehension and its consequences than the benumbing and soothing influence of morphia.

Rapidity of producing anæsthesia, and smaller quantity of anæsthetic required.—It is only necessary for anyone to try this method a few times to be thoroughly convinced upon these points. I would rest a decision upon them to half a dozen observations by any candid person.

Absolute quiet of the patient.—This is a point of no mean importance; one alone sufficient to make the method worthy the attention of the operating surgeon. This feature is of especial value in all prolonged operations. Under this method the transition from profound to partial anæsthesia is not so rapid, and the patient does not so readily again begin to feel pain and move about. In some twenty cases of ovariotomy under this method, I cannot remember more than one in which a limb was moved during the operation; straps to bind the leg of the patient to the table, as used by some noted operators, are simply superfluous. Recently, I had a striking instance of the value of this point. The operation was for strangulated hernia, at night, with but one medical assistant, and he inexperienced and timid with anæsthetics. Having placed the patient, a female, under the influence, the sponge was committed to his care, while the dissection and sponging the wound was performed by myself. Anyone who operates under these circumstances will congratulate himself on having preceded the anæsthetic by a hypodermic injection of narcotics. My patient never moved, notwithstanding the irregularity and intermittences of the administration.

Upon two points my experience is not in accord with that of Dr. Aubert. I do not find that there is *absence* of vomiting upon awakening. I certainly believe that disagreeable symptom to be less in frequency and degree, but such a point is difficult to prove. To claim its entire absence would be to claim too much for the method. Decidedly, the patient does not awaken more readily after this method; the reverse is the truth, and I believe it to be an additional point in favor of the plan. And after awakening the patient drops off again easily, and passes hours in slumber or dozing under the influence of the narcotic, the pain of the operation soothed and assuaged.

For the benefit of those not having access to the papers published upon this subject, it may be stated that the amount generally used by me is seven to twelve minims of a solution of sixteen grains of morphia and one-half grain of atropia to the ounce of water. For very prolonged and severe operations the amount of atropia may be increased to advantage. Experience has taught me that *time* is an element of importance. Fifteen to twenty minutes should elapse between the administration of the hypodermic injection and the beginning of the administration of the anæsthetic. When the one immediately or soon precedes the other, the dangerous stage of excitement is *not* diminished.

Far the major amount of experience which has been published as to mixed anæsthesia, has been made with chloroform as the anæsthetic. What is here presented, and all my experience has been with the mixed vapors of alcohol, chloroform and ether, known as the "A C E" mixture: 1 part alcohol, 2 parts chloroform, 3 parts ether, by measure.

Those wishing further information upon the subject may consult, besides Bernard's work:

Recherches sur L'Anæsthesie Chirurgicale Obtenue par l'Action Combinee de la Morphine et du Chloroforme. Par H. de Brinon, Paris, 1878.

De l'Anæsthesie Mixte, ou de l'Emploi Combiné de la Morphine et du Chlorofome. These par Verriet-Litardiere, Paris, 1878.

An article by Mollow, of Moscow, a translation of which may be found in the *Revue des Sciences Medicales*, T. X.

MULLEIN IN ITS INFLUENCE ON THE BODY WEIGHT IN PHTHISIS.—Dr. F. J. B. Quinlan writes to the *British Medical Journal* of a case upon which he had before published a note, where the weight in pretubercular phthisis had increased from ninety pounds four ounces to 102 pounds twelve ounces, with corresponding benefit to the pulmonary symptoms, in a month's time. His further record of the case was to the effect that in a hospital with the advantages of the best country air and a very liberal dietary, the mullein being discarded, and cod liver oil, a tablespoonful morning and evening, substituted for it, the increase in weight during the second month was seven pounds eight ounces, as against the twelve pounds eight ounces under the mullein.

MEDICAL PROGRESS.

ANATOMY AND PHYSIOLOGY.

Abnormal Development of Olfactory Nerves.—The Paris correspondent of the *British Medical Journal* gives M. le Bec's recent communication to the Biological Society, of Paris. A woman died at the Hopital St. Antoine, from a surgical affection. The brain was removed for purposes of demonstration, and it was observed that the olfactory nerves were apparently absent. On the left side there was a nerve-stump, presenting the aspect of a small flat band, measuring eight millimeters in length and two wide. It rose at the spot where the roots of the olfactory nerves normally unite, was directed forwards, reached the inferior surface of the left optic nerve, adhered to it by means of the pia mater, and stopped abruptly. On the right side the olfactory nerve was still less developed, and was represented by a slight swelling of about the size of a pea of the gray substance behind the optic nerve, exactly on the spot where the olfactory nerve ought to exist. Backward, on a deeper plane, the olfactory nerve was represented by a gray band two millimeters long; this did not reach the optic nerve. The external roots presented an equal degree of development. The inner white root was detected with difficulty. The convolutions of the inferior surface of the frontal lobe differed from those of a normal brain. On the left side, where the nerve-stump existed, the olfactory sulcus was normally placed. On the right side, where the olfactory nerve was practically wanting, the olfactory sulcus was absent. The cribriform plate of the ethmoid bone was normal. During life the patient possessed olfactory perception as keenly as most people, enjoyed the scent of flowers, and especially disliked the smell of meat and fish. M. Mathias Duval examined the pituitary body, and discovered gray nerve fibers, apparently belonging to the olfactory nerve, which suggested the hypothesis that the olfactory nerve was reduced to fine filaments, which had adhered to the pia mater and had been removed with this membrane. This hypothesis indicates the advisability of preserving the pia mater and arachnoid membrane of the orbital surface of the frontal lobe, in order to examine it with the microscope.

MATERIA MEDICA AND THERAPEUTICS.

Hydrate of Chloral in the Treatment of Blenorrhagia.—Dr. Lopez Rodrigues, of the Brazilian Navy, being attached to a vessel which was poorly provided with medical stores, was consulted by a sailor who was suffering from a very acute blenorrhagia, with hæmaturia; he had recourse to injections of chloral hydrate in the following manner: Hydrate of chloral, 4 grammes; water, 250 grammes; for three injections a day. Much to his surprise, there was a very rapid improvement, and on the fourth day the patient returned to service. He continued to use it in twenty-one cases, of which two were women suffering from acute vaginitis. Several of the cases were of long standing, having resisted previous treatment. In two cases there was a relapse, which yielded to the renewal of the medicine. The treatment is not painful. The first injections give a slight sensation of warmth.—*Unias Medica de Rio de Janeiro, and Gaz. Heb. des Sc. Medicales.*

Paraldehyde as a Hypnotic.—Cervello was the first to produce this isomeric modification of aldehyde. After experimenting upon animals, he used it upon himself, by taking four grammes in solution in water in the course of an hour. It produced a desire to sleep without affecting the pulse or respiration, and without any headache. Using it afterwards upon others, he fixed the dose for women at 1 gramme, for strong, vigorous men at four grammes. The dose has been determined to be triple that of chloral. An adult can take ten grammes in divided doses without any bad effect. It is best given in aqueous solution with a little sugar, in the proportion of three per cent of paraldehyde.

After the publication of Cervello's observations others recorded their clinical experiences with the drug. Monselli has employed it in 350 cases of mania, melancholia, and neuropathies. Generally, he found three grammes sufficient to produce a sleep of from four to seven hours, which was induced in twenty to thirty minutes after its ingestion.

Perelti found paraldehyde to possess certain advantages over chloral in that (1) even in strong doses there is no danger from action of the heart; (2.) it has no convulsive effect; (3.) it produces sleep rapidly without any stage of excitement and without congestion; (4.) the awakening is not accompanied by any disagreeable symptoms. On the other hand, it possesses the disadvantages of (1.) a rapid tolerance, so that, much more than is the case with chloral, an increase of the dose is necessary; (2.) it communicates a persistent and very disagreeable odor to the breath; (3.) it is very expensive. This last objection has been in part overcome.

Berger has given it in eighty cases. In nineteen it produced, after ten to twenty minutes, a profound sleep of several hours; in forty-two the sleep lasted from one-half to three hours; in nineteen the result was negative. The inconveniences observed were rare and of but little importance—bad taste, nausea, vomiting, vertigo. The pulse was generally somewhat diminished in frequency; diuresis was also diminished. He prescribes it as follows:

℞ Paraldehyde, ʒj; mucilage gum acacia, ʒij; syrup of bitter orange peel, ʒj. To be taken as a dose.

He recommends its use where chloral is inefficacious.

Masius has used it for some time in his clinics. He finds the sleep produced by it to be beneficial and reparative, without leaving behind it any discomfort or headache. Some patients have complained of the bad taste of the medicine, and also of nausea and vomiting. When sleeplessness is produced by pain the paraldehyde has either no effect or affords but slight relief, and even in cases where there is no pain

the effect may be insignificant. He prescribes it as follows:

℞ Paraldehyde, 45 to 90 grains; aqua dist., ʒiij; syr. simplex, ʒv. To take at night in the course of a quarter of an hour.—*Le Progrès Médical.*

On Certain Medical Incompatibilities and Contra-Indications.—M. Rabuteau presented some of his views on this subject to the Société de Biologie (Comptes Rendus) referring especially, first, to the incompatibility of iodide of potassium and sulphate of quinine. It is well-known that pure iodide of potassium is generally well tolerated in ordinary doses, and the same can be said of sulphate of quinine. But when these two drugs are given together, or at short intervals, even in medium or small doses, such as 1 gramme of iodide of potassium and 50 centigrammes of sulphate of quinine, a remarkable intolerance is created. This intolerance is marked by disturbances of the digestive organs and other more general symptoms. The indigestion consists in anorexia, nausea, vomiting, pain in the epigrastrium and colic. The general symptoms consist of anxiety, inexpressible discomfort, slowing and diminution of the pulse, pallor and general fatigue. These symptoms, more or less marked, recall perfectly those which occur after the ingestion of pure iodine or tincture of iodine when the iodine is precipitated in the stomach.

A mixture of iodide and iodate of potassium has long been recognized as unstable in the presence, as it gives off immediately free iodine. The same thing takes place with this mixture and the gastric juice on account of the acid which is there present. This is most striking when, after giving a dog a little bread, he is given a mixture of, say, potassium iodide 1 gramme, and potassium iodate 10 centigrammes, dissolved in water. He vomits the bread, which is colored of a violet blue by the free iodine. If he took either of these ingredients singly there would be no such effect.

So in this mixture of iodide of potassium and sulphate of quinine, it decomposes in the alimentary canal, not only in the stomach, but also in the intestine, where the secretion is also acid, notwithstanding what has been said to the contrary. Free iodine is liberated. The decomposition is a slow and gradual one, which accounts for the prolonged feelings of discomfort a day at least after the ingestion, which gradual process corresponds to the time required for its elimination by the successive processes of secretion and re-absorption.

Second.—Contraindications to the use of cinchona in the woman during the menstrual period. A case is referred to under this head of a young woman suffering from malaria, who took tincture of cinchona, or small doses of quinine—30 to 50 centigrammes in a little wine—when suffering from fever. On three occasions she took these medicines during her menstrual periods, and suffered severely in consequence from severe hypogastric pains and fainting. The heart beats were lessened in force and frequency so as to be imperceptible. The drug was not abandoned, but it was never again administered during a menstrual period, and these symptoms never recurred.

Dr. Sonsa Refoios gives a case where an infusion of quassia amara given during the menstrual period produced violent uterine pains, comparable to the pains of childbirth; placing in his argument quassine among the agents modifying innervation and myotilitis. It is capable, in fact, of producing convulsions. If quassia then is to be interdicted to women during their menses, the use of beer should also be interdicted, as its bitterness depends greatly upon substances of this class, notably the beer of Surinam, so called because there is substituted for the hops a quassia which bears the official name of wood of Surinam.

The Physiological and Medicinal Action of Hydrofluoric Acid and the Fluorides.—Surgeon L. A. Waddell, M. B., the Resident Physician of the Medical College Hospital, of Calcutta, has an article on this subject, in the *Indian Medical Gazette*, which he summarizes as follows, in brief:

(1.) The corrosive action on glass by a few precautions can be overcome.

(2.) The topical action is attended by more acute pain than in other concentrated mineral acids. In contact with the skin, by combination with the lime, and other bases of the tissues, it forms a hard, horny sheath, under cover of which it continues to penetrate the deeper tissues till its energy is expended. On removal of the slough the resulting ulcer manifests a readiness to heal scarcely inferior to that produced by oil of vitriol.

(3.) Poisoning treated as with other strong mineral acids.

(4.) The fumes of the acid on inhalation provoke dyspnœa, and spasmodic cough, and if concentrated, produce intense bronchial and laryngeal irritation, with spasm of the glottis, convulsive cough, and in some cases speedy death. The inflammatory action seems to have nothing distinctive in itself; a powerful argument against its use in the treatment of diphtheria.

(5.) The alkaline fluorides are not absorbed through the skin.

(6.) The remote action of the alkaline fluorides is essentially similar to that of the dilute acid. The salts are to be preferred to the acid for ordinary medicinal use.

(7.) Fractional doses, after a time, slightly impair the appetite. Moderate doses induce nausea and tend to disorder the stomach. Large doses readily excite vomiting by direct action on the gastric mucous membrane. No vomiting occurs on subcutaneous administration of the drug, and free dilution diminishes the emetic tendency. No purgative action ordinarily attends the use of the salts even in large doses.

(8.) Nutrition is impaired by the prolonged ingestion of small doses of the alkaline fluorides or the acid, and this atonic condition is accompanied by slight loss of body-weight.

(9.) The amount of urea exereted in the urine is increased. The body-temperature is distinctly re-

duced, the pulse-rate somewhat slowed, and the arterial pressure slightly lowered?

(10.) The alkaline fluorides and the acid profoundly modify the constitution of the blood, producing an anæmia (oligocythæmia), the essential characteristic of which is that the corpuscles suffer a decrease out of all proportion to the hæmoglobin. With the provers, after a five-days' course of the drug, the general loss averaged about one-fourth of the total red corpuscles. The hæmoglobin is only slightly reduced in amount and at the same time the size of the red disc becomes slightly larger.

(11.) In the malarially enlarged spleen, where the function of disintegration of the red corpuscles is inactive, the exhibition of fluorine by stimulating this function reduces the total volume of the contained blood, and thus enables the muscular fibers (?) to regain their normal activity, and so contribute toward the further reduction of the enlargement.

(12.) Toxic doses affect frogs in a similar manner to warm-blooded animals.

(13.) Circulatory depression is a constant and characteristic effect of fluorine compounds. The cardiac contractions are slowed and weakened, and with poisonous doses the heart is arrested in diastole. The contractions are found to be arrested a considerable time before the contractility of the cardiac muscle to mechanical stimuli is lost. Under full medicinal doses the sphygmograph shows, after a time, a distinct reduction of blood-pressure.

(14.) Increased frequency of the respiratory act follows the injection of poisonous doses of the drug. The respirations soon become retarded, slightly irregular and evidently laborious. The respiratory difficulty increases, and the inspiratory efforts ultimately become convulsive (asphyxial) in character.

(15.) Even in the largest medicinal doses no narcotic effect, nor even drowsiness results. In toxic doses the pupils at first become slightly dilated, then afterwards markedly contracted. Voluntary movements cease only a few seconds before the final arrest of the respirations and general circulation. The medulla appears to be specially affected. The spinal reflex irritability persists throughout unimpaired. The voluntary muscles retain their electric excitability for some time after death.

(16.) The salivary secretion is very slightly increased, especially after large doses, which excite nausea. Bulk of urine slightly increased.

(17, 18, 19, 20.) Large, and even moderate doses cause such unpleasant symptoms as to make it difficult to keep up its use except in fractional doses; no use in epilepsy, harmful in phthisis pulmonalis, mitral disease and aortic regurgitation. Of benefit in rickets; no use in acute rheumatism.

(21, 22, 23.) Of use in soft vascular goitre, in plethoric states, such as gout, and for relieving vasaular fullness in the earlier stages of aortic aneurism. Reduces the chronically enlarged spleen of malaria readily, but do not prevent further enlargement resulting from fresh paroxysms of the intermittent. Quinetum or quinine fluorides the best. Iron fluorides of no value. Fluorine is contra-indicated in every case where grave adynamic symptoms are present.

Incompatibles, lime or lead salts, organic acids.

Dose: Of the acid, 15 minims in 2 drachms of a ½ per cent. solution of the alkaline fluorides; ¼ grain to 3 grains.

Iodoform in Its Influence on the Body Weight in Phthisis.—Dr. R. Shingleton Smith (*Bristol Medico-Chirurgical Journal*) gives a case of a man, aged 35, who used to weigh 172 pounds; six months before record weighed 152 pounds, one month before weighed 134, at date of record weighed 120 pounds with clothing. Phthisis pulmonalis was well established, and he was put upon iodoform, two grains every four hours for the first four days, weight 113 pounds without clothing; three grains every four hours for seven days, weight 113 pounds; six grains every four hours for a month, weight 110 pounds. Up to this time the improvement in strength and general condition had been marked, and the temperature ran from 98.6° to 99.2°. But now symptoms of iodoform intoxication appeared—weakness, vomiting, foggy vision, hallucinations. Drug stopped for four days, and renewed in three-grain doses for a week. The weight rose in that time from 109 pounds to 112 pounds. The renewal of the drug renewed the symptoms of intoxication, which had somewhat abated. It was again stopped for four days, and again renewed in three-grain doses, with cod liver oil ℥i three times daily. This was kept up for eleven days, with a gain in weight from 112 pounds to 115 pounds, with a temperature of 99°. It was then stopped entirely.

Dr. A. Ransome read a paper on this subject before the Section of Medicine of the British Medical Association (*British Medical Journal*), embodying the records of his experience with twenty-one complete cases in the Hospital for Consumption. He gave it in the form of a pill, one and one-half grains three times daily. It (the iodoform) caused so much nausea and disturbance of the digestive organs, that he combined it, to great advantage, with two grains of croton chloral. Of his twenty-one cases four were in the first, five in the second, and twelve in the third stage of the disease.

Of the four cases in the first stage, one gained two and one-half pounds in three weeks, the second two pounds in one month, the third gained eleven pounds in four months, the fourth *lost* eight pounds in three months.

Of the five cases in the second stage, the first was losing three pounds in a fortnight, he gained one pound in a fortnight, discontinued the drug, lost weight, gained slightly on its renewal, lost again on its omission; on its second renewal, improved and regained former weight, the second gained two and one-half pounds in ten days, third gained somewhat, fourth gained, fifth gained three and one-half pounds in the first fortnight.

Of the twelve cases in the third stage, two distinctly gained weight, six remained approximately at the same weight. The remaining four have all diminished in weight with more or less rapidity.

From a review of all the cases, Dr. Ransome is in-

clined to attribute to iodoform some slight improvement, even in cases in which it was manifestly hopeless to expect cure, and thinks that in the earlier stages of the disease it is decidedly worthy of further trial.

SURGERY.

A CASE OF PRIAPISM.—A. H. Boys, L.R.C.P., (*Bristol Medico-Chirurgical Journal*) records the case of a gardener, 65 years of age, who came to him suffering with persistent priapism of a week's standing, induced by irritation of the nates and gluteal region from unusual horseback exercise. He ordered a cold lead lotion with pot. bromid. grs. x internally every three hours. In five days there was no improvement. He then pricked the penis all over with a fine needle. Serum flowed abundantly. This, with constant hot applications, also failed to relieve the condition. Cold, in the shape of ice, and a mustard plaster to the spine, with tincture of belladonna x minims every three hours, were substituted and also failed. Finally, 15 days after its first occurrence, suppositories of one-half gr. of belladonna with a pill containing two grs. of iodoform, and one and one-half grs. of extract of conium, produced a decided improvement in three days, and perfect relief at the end of 3 weeks. There was a curious complication in the case on account of the stupidity of the patient. The belladonna suppositories were made large, and were to be inserted every four hours. On the third day after they were ordered, it was found, on complaint of the patient, that they pained him severely; that he had been trying to insert them into his urethra!

MEDICINE.

OCCURRENCE OF THREE INFECTIOUS DISEASES IN THE SAME INDIVIDUAL.—Dr. Prior, Assistant to the Royal University Polyclinic in Bonn, communicates to the *Deutsche Med. Wochensch.* a case in which three different infectious diseases occurred in the same individual in the space of one month. Three children were attended on Nov. 18 for well-marked scarlatina, with a temperature of 104° Fahr., copious eruption, and some difficulty in swallowing. Desquamation began on Nov. 21, and proceeded normally, only one child having slight renal symptoms, until on Dec. 1, the two younger were attacked with rigors, headache and malaise, and on the following day were covered with a thick eruption of varicella. On Dec. 3, in the absence of the mother, a child from the next room, intercourse with which had been carefully avoided on account of measles, was found playing with the child, and showed signs of measles next day. The first patients were now carefully watched, and on Dec. 13 the temperature was found to be raised, with photophobia and slight coryza; on the 15th the eruption of morbilli appeared. Its course was protracted, and caused some anxiety, but finally the child recovered. The cases show how the two poisons of scarlatina and varicella may be in the organism at the same time, and how measles may be conveyed by a two hours' intercourse in the prodromal stage, while the crusts of varicella are still present, the measles showing itself as soon as ten days later.—*The Medical Press and Circular.*

THE BRITISH MEDICAL ASSOCIATION MEETING AT BELFAST.—The fifty-second annual meeting of the Association will be held on July 29, 30, and 31, and August 1, 1844, at Belfast. The address in Medicine will be delivered by Sir Andrew Clark, Bart., M.D., F.R.C.P., Physician and Lecturer on Clinical Medicine, London Hospital. The address in Obstetric Medicine will be delivered by George H. Kidd, M.D., F.R.C.S.I., Master of the Coombe Lying-In Hospital, Dublin. The address in Physiology will be delivered by Peter Redfern, M.D., F.R.C.S E., Professor of Anatomy and Physiology, Queen's College, Belfast.

Visitors coming from America to attend this meeting can travel by any of the following routes: 1. A Cunard steamer will leave (*a*) New York on Wednesday, July 16, arriving in Queenstown about the following Thursday week, July 24; (*b*) Boston on Saturday, July 19, reaching Queenstown the following Monday week, July 28. 2. A White Star steamer will leave New York on Saturday, July 12, and on Saturday, July 19; due at Queenstown about July 20 and 27. 3. An Inman steamer will leave New York on Tuesday, July 15; due at Queenstown about July 23. 4. An Allan steamer will leave Quebec on Saturday, July 19, arriving in Londonderry about the 26th or 28th July. 5. An Anchor steamer will leave New York on Saturday, July 19; due at Londonderry on July 29. Londonderry is 95 miles from Belfast, and trains run daily between the two places. The route from Queenstown to Belfast is from Queenstown to Cork, Cork to Dublin (165 miles by train), and Dublin to Belfast (113 miles).

MEETING OF THE INERNATIONAL CONGRESS AT COPENHAGEN.—The time of the meeting of the British Medical Association at Belfast has been fixed so as not to interfere with the International Medical Congress, which is to begin at Copenhagen on August 10. A steamer will leave Hull (England) on August 2 and 9 for Copenhagen; and on August 5 a steamer will leave Leith (Scotland) for Copenhagen. Both these places (Hull and Leith) can be reached on any day by leaving Belfast on the previous evening by the cross-channel steamers. Visitors after attending the meeting of the British Medical Association in Belfast will have ample time to travel to Copenhagen for the Congress.

Communications in reference to the meeting of the British Medical Association at Belfast to be addressed to the Hon. Local Secretaries, John Moore, M.D., Alex. Dempsey, M.D., John W. Byers, M.A., M.D.

IT has been estimated that the loss to the producers from hog cholera in1875 amounted to the enormous sum of 1,500,000.—*Louisville Medical News.*

THE

Journal of American Medical Association.

PUBLISHED WEEKLY.

THE EDITOR of this JOURNAL would be glad to receive any items of general interest in regard to local events, or matters that it is desirable to call to the attention of the profession. Letters written for publication or containing items of information, should be accompanied by the writer's full name and address, although not necessarily to be published. All communications in regard to editorial work should be addressed to the Editor.

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RUSH MEDICAL COLLEGE COMMENCEMENT EXERCISES.—The forty-first annual Commencement exercises of the Rush Medical College, Chicago, were held in Central Music Hall on the afternoon of the 19th of February, 1884, and were attended by a large audience, The regular members of the Faculty appeared upon the stage attired in long black silk gowns or robes, headed by Dr. J. Adams Allen, President of the college,and Bishop Fallows as Chaplain. After music and prayer by Bishop Fallows, the Secretary, Prof. J. H. Etheridge, read the annual report, from which we learn that the whole number of matriculants attending the college during the past year was 418, of whom 166, or about 40 per cent., passed the required examinations and received the degree of Doctor of Medicine.

The Secretary stated that for the first time in the history of the college,the Faculty required a preliminary examination at the commencement of the year just concluded. His analysis of the literary qualifications of the 166 candidates for graduation gave the number holding literary degrees 47; normal school and academic graduates, 12; graduates of High Schools, 28; registered pharmacists, 13; holders of teacher's certificates, 46; leaving 20 without any evidences of attainments, except such as were obtained by the personal examination. Although the reporters represent the Secretary as stating the number holding literary degrees to be 47, as printed on the programme, only 24 of the names have appended any titles indicating the possession of a literary degree.

As the commencement of this college year was the first time the Faculty had required a matriculate examination in regard to general education, it would have been an interesting statistical item if the Secretary had stated how many of the whole number presenting themselves, had been rejected for insufficient literary attainments. After the report of the Secretary, the degrees were conferred in the usual manner by the President of the college, Prof. Allen; and in addition to the 166 ordinary degrees, an honorary degree was conferred on Dr. A. L. Justice. A valedictory address in behalf of the class was given by Dr. D. S. McArthur, after which the regular doctorate address was delivered by Prof. Norman Bridge, chiefly on the progress of medicine.

The orchestra discoursed excellent music at suitable intervals in the progress of the programme, and the exercises closed with a benediction by Bishop Fallows.

In the evening the Faculty of the college gave an elegant banquet to the Alumni and members of the graduating class in the Grand Pacific Hotel. While the banqueting was in progress, the exercise was pleasantly varied by a presentation. Prof. J. Nevins Hyde, on behalf of President Allen, presented a life size portrait of the latter to the Faculty and College Trustees. The gift was accepted for the college by Prof. H. M. Lyman. The present was in commemoration of the twenty-fifth anniversary of Prof. Allen's connection with the college as one of the Faculty.

MEDICAL LEGISLATION IN VIRGINIA.—In a recent issue of the JOURNAL we noticed with pleasure and approval the enactment of a law by the Legislature of Virginia, establishing a State Board of Medical Examiners, and requiring all future applicants for permission to practice medicine in that State to undergo a satisfactory examination by the State Board, regardless of college diplomas.

We learn that the same Legislature has now before it a bill for appropriating an annuity of $7,500 to one of the medical colleges of the State, on condition that said college shall give *free* medical education to as many medical students annually as there are members of the Legislature (136), each member having the privilege of naming one student. This bill is bad in every respect. The idea of appropriating the public money derived from the taxation of the people, to give free professional education to the proteges of a legislative body, is positively vicious. The true line of justice and sound public policy, in regard to appropriating public money for educational pur-

poses, is so clearly stated by a non-medical writer, in a recent number of the *Lynchburg Virginian*, that we copy it entire, as follows:

"We notice a bill reported in the Senate, to grant an annuity to the medical school at Richmond, coupled with the condition of free tuition to as many students as there are members in the General Assembly.

"In the earnest absorption of the members with the multifarious work upon their hands, there is unusual danger, at the present time, that proposals of this kind may pass without the sifting scrutiny they should receive.

"We are in no sense hostile to the medical college; on the contrary, we desire to see it prosper, and become a great school of medical science. But we feel sure, that this measure does not tend to that result. If the medical college stands in need of a grant of public money to supply some essential need which cannot be otherwise attained, let such grant be made, after careful inquiry into the facts, to see that the purpose is one which justifies such application of the public funds. But we do object, out and out, to the proposal to make doctors at the expense of the State treasury. In other words, we hold that there is no sound principle on which the State should be called upon to give gratuitous professional education in the so-called learned professions. Normal schools for training the teachers of the public school system, stand on a ground to themselves. They are a preparation of the public servants for the most efficient discharge of their duties to the public, in their office. Not so with private professions. A private profession is simply a man's private business, by which he proposes to make a support for himself and his family. The public has no concern with it, beyond what it has with any other form of individual industry. It is, therefore, a misapplication of public money to give gratuitous professional education.

"If free instruction is to be given to young doctors, why not to young aspirants to the bar?—why not to clergymen?—to civil and mining engineers? If *professional* men of any class are to be furnished for their special business—equipped for their life work at State expense, why not have commercial and business colleges for clerks, and so on without end? The *principle is wrong*. Public education can be justified only on the ground that the citizen, by being taught the elements of education, is thereby better fitted to meet and discharge his duties to society *as a citizen*, in those functions which are common to all citizens. This reason utterly fails to apply to professions and professional education. They are *special*, and *individual*, by the very terms of the statement—and, therefore, outside of the reason which vindicates public school instruction for the masses.

"No one man has any claim on the public to be furnished with a business, or to be qualified for it, beyond every other man.

"Gratuitous professional instruction at the public expense, is, therefore, a violation of common right—and a misapplication of the public money.

"Besides this, one professional school cannot be placed in this position, without injury to all the others in the State—all ought to be on the same footing.

"Many other objections occur to us, which we have not space to develop. The movement seems to us to be wrong in principle; and in policy highly objectionable, for various reasons. We hope the General Assembly will not think of sanctioning it."

BIDDING FOR PRACTICE AND UNDERBIDDING.—A correspondent at Charleston, Mo., requests an answer to the two following questions through the pages of the JOURNAL:

1st. "Is it professional for a physician to propose to the authorities of a city or county to do the pauper practice of such city or county for a period of one year for a stated amount?"

2d. "If a physician had a contract of the kind just mentioned, would it be ethical for another to propose to the authorities for a sum less than the one having it, he knowing what the other was receiving for said work?"

While the National Code of Ethics contains no direct statement or rule regarding what has been called "contract practice," or offering to attend the sick poor of a city or county for a specified sum, the National Association has several times taken such action as would answer both the above questions in the negative. Sound principles of ethics, in other words, correct principles of professional conduct, undoubtedly require that all claims for pecuniary compensation should be based on two plain rules, namely, on the amount and kind of services rendered, and the rate adopted either by common consent or actual agreement by the profession practicing in any given locality. All propositions, either to families, corporations, city or town authorities, etc., to bestow ordinary professional services, either on the rich or the poor, for a specified sum per month or year, are clearly in violation of those rules. The second question involves so plain a proposition to *underbid* as to leave no doubt of its unprofessional character.

EXTRA COURSES OF INSTRUCTION.—The students in the Chicago Medical College are being favored during the present college term with some valuable instruction in addition to the usual full curriculum of that institution. Dr. J. S. Marshall is giving one lecture per week during all the last half of the collegiate year on the diseases and defects of the teeth and their appendages, which are listened to with much interest by the students. And Dr. H. J. Detmers has just closed a series of four or five lectures on such diseases of domestic animals as are liable to be communicated to the human species; in-

cluding glanders and farey in the horse; hog cholera, trichinosis, etc. These lectures were very valuable, and were listened to by the students with the greatest interest.

THE CHICAGO DENTAL INFIRMARY.—The Collegiate Department of this institution opened its second annual course of instruction on Monday evening, February 25, 1884, with encouraging indications of success.

NOTICE TO EXHIBITORS.—Manufacturing chemists, pharmacists, instrument-makers, etc., who wish space provided for their exhibition during the meeting of the American Medical Association, beginning May 6, should make application to Dr. D. C. Patterson, 919 I street, Washington, D. C., before April 1.

NEWS ITEMS.

CLINICAL CHARTS.—We note an advertisement in the *Medical Times and Gazette* of temperature and diet charts, drawn up by medical men of clinical experience, for use in hospitals and general practice. They are sold at the rate of $6 per 1,000, or 84c per 100, by Wodderspoon & Co., 7 Serle Street, Lincoln's Inn, London. We make this reference not with any desire to advertise the firm, but to call the attention of the profession in hopes a sufficient demand might be created to induce some of our own stationers to supply them. They certainly insure much saving of labor, preserve a correct record and furnish a valuable history for future reference at but little expense. It is surprising that we have never yet had a satisfactorily clinical case book issued for the use of the private practitioner.

THE MEDICAL SICKNESS, ANNUITY AND LIFE ASSURANCE SOCIETY OF THE BRITISH MEDICAL ASSOCIATION.—Some years ago this body (the B. M. A.) attempted a scheme similar to the heading of this note, and several hundred persons joined in the enterprise. It fell through from inanition. The claims made upon the funds were very few, and adequate means were not taken to make the operations of the society continuously well known and to keep it in active operation. In the end the whole of the funds were returned, and no loss was incurred by the subscribers. It has now been revived, and at the last session of the British Medical Association, documents were presented showing the written adhesion of upwards of 600 members of the Association to such a society in principle. A provisional committee was formed to consider the subject and prepare a definite plan for giving effect to the decision arrived at.

As a result it is proposed to start a society, the leading objects and general principles of which shall be as follows:

Sickness.—Payment during sickness incapacitating from professional duty of $10, $15 or $20 per week, reducible to half those amounts after twenty-six weeks' continuous sickness, the reduced rate to continue throughout the whole period of illness. After age 65, sickness pay to cease, and be replaced by absolute annuity.

Annuities.—The provision of annuities of $100, $150, $200 or $250 to commence at age 65, and be paid absolutely without reference to the health of the members.

Life Assurance.—Sums payable on the death of members of $125, $250, $375, $500, $625, $750, $875, $1,000.

Payment of all premiums to cease at age 65.

Members may join for the whole or any of the above assurances, and may relinquish, vary or retain any of them at pleasure.

The committee have power to pay a sum not exceeding 70 per cent. of the full surrender value on policies relinquished.

Members may at any time extinguish future contributions by the payment of a sum down.

The society will be managed by a committee and officers appointed by the members.

All funds and property of the society will be vested in trustees, and will belong absolutely to the members.

The management expenses will be kept separate, and are not to exceed 10 per cent. of the premium income.

The affairs and funds of the society will be examined and valued every five years, and the whole of any declared surplus or profits will be at the disposal of the members.

There are three tables given to show the quarterly premiums required up to the age of 49, copies of which may be obtained (free) of the Provisional Secretary, at the British Medical Association office, 161 A, Strand, London, W. C.

SOCIETY PROCEEDINGS.

OBSTETRICAL SOCIETY OF PHILADELPHIA.

Stated meeting, Thursday, February 7, 1884. The President, R. A. Cleemann, M.D., in the chair.

A YEAR'S WORK IN OVARIOTOMY.

Dr. Wm. Goodell read a report of his cases of ovariotomy during the past year. Of these he had twenty-five, with seven deaths. Eleven of them were performed in the private rooms of the Hospital of the University of Pennsylvania, with one death. Ten were operated on at their own homes, with five deaths, and four at his private hospital, with one death. He attributed the majority of these deaths to three causes: First, that he made it a rule never to doom a woman to certain death by refusing to operate on her, however forlorn the hope of her recovery might be, and three of these fatal cases were very ill indeed at the time of the operation, from septicæmia and purulent cysts. Secondly, that the women of this country

being unwilling to go to a hospital, either insist on being tapped, which increases the risks of the radical operation; or else postpone the operation until the tumor has become very large, adhesions have formed and the health has become greatly undermined. Out of his twenty-five cases, he had but eight without adhesions, and one of these, a case of double ovariotomy, died at home, he not having seen her or treated her after the operation. Thirdly, that five of his fatal cases had been operated on at their own homes, which were so distant that he was able to see but one of them after the operation, and she did not rally, but died in eight hours, from the shock of the removal of an intra-ligamentous cyst, universally adherent. The fatal case at his private hospital was one of pelvic abscess bursting into the bladder. The operation was not a difficult one, although the lower portion of the cyst had to be separated from the two layers of the broad ligament by which it was enveloped. The sole fatal case out of eleven performed at the Hospital of the University was due to hospitalism. This he deemed a good record, for the building is used as a general hospital, with many railroad accident cases and suppurating wounds. In this hospital he always operated in one of the private rooms, where the patient was kept until all danger was over.

While acknowledging that his results were not so good as those of British ovariotomists, he said that, on the other hand, it was to be said in his favor that he never refused to operate on a woman, however slim her chances of recovery. He made this statement because, according to remarks made by Dr. Sutton at the last meeting of the American Gynæcological Society, Billroth is the only one among European ovariotomists who "refuses to operate npon nothing that deserves the chance of life," and his success amounts to about 65 per cent., whilst one of the most successful of British ovariotomists "does not remove very large tumors, viz.: those which weigh from 60 to 65 pounds, with extensive adhesions, etc."

Out of the twenty-five cases of ovariotomy, there were twelve in which both ovaries were removed. In all these cases, the second ovary was positively diseased. Yet with a larger experience he (Dr. Goodell) was becoming more and more inclined to remove both ovaries in all cases of malignant degeneration of one ovary; in all women who have passed the climacteric or who are approaching it, and in all cases complicated with fibroid tumor of the womb.

Finally, he referred to the fact that some ovarian cysts, although they may appear to the eye benign, show by their subsequent history that they are malignant; the woman dying a few months later from carcinoma of the pelvic organs, or at the site of former adhesions. Very unfortunately, there are no diagnostic criteria to indicate the character of such a cyst.

Dr. A. H. Smith feels that Dr. Goodell is hardly right in saying that in England desperate cases are rejected. In his own experience, while in England recently, several cases which were very desperate, and which would have been generally rejected here, were operated upon successfully, and were ready for discharge three weeks after operation. It occurred to him that the lower average temperature had much to do with the result. The thermometer is not allowed to rise above 65° F. in the room in which the patient is kept, and in Lawson Tait's cases it rarely goes over 60°, and never up to 65°. Perhaps this has a good effect in preventing hyperpyrexia. The English ovariotomists are also very careful in details, especially in preventing hæmorrhage, and use an immense number of hemostatic forceps. Ovarian cysts are remarkably common in London.

Dr. B. F. Dawson, of New York, upon invitation by the President, spoke of the English ovariotomists, and alluded to what he had himself seen, while on visits to England, as to very desperate cases being operated upon. His own late experience had been so good, that he was inclined to attribute it, as well as the good results of the English operators, to absolute painstaking in the most trifling details, with absolute cleanliness—not simply antisepsis, but the utmost care throughout every step of the operation. Among other things, a very large number of hemostatic forceps are used to secure each bleeding point the moment that bleeding commences. His own last six cases of laparotomy, performed this winter, two of which were very desperate in their character, have been successful, and the results he felt were largely due to the avoidance of any preventable hæmorrhage, and great care through all stages of the operation to prevent blood or fluid from the cyst escaping into the peritoneal cavity. This care is exercised throughout the "toilet of the peritonæum," and he always uses a flat sponge, as does Mr. Wells, inside of the abdominal walls, upon the intestines while introducing the closing suture, which is removed only when it becomes necessary to do so to twist the last wires.

He always uses napkins to fold over the edges of the abdominal incision, to prevent the oozing from the edges escaping into the peritoneal cavity or soiling the operator's fingers. He also enfolds the cyst in towels as it is withdrawn from the cavity, to guard against even a trace of fluid soiling the intestines or wound. He clamps the pedicle temporarily when possible, and places a napkin under the clamp before dividing and cauterizing it. Every adhesion that shows any risk of bleeding is cauterized as soon as it is separated, even when ligated. Douglas' pouch, especially, is sponged out until the sponges come away absolutely clean. In a recent very desperate case, one in which Dr. Emmett expressed his sympathy with him as to its almost certain fatality, the operation occupied two hours and forty minutes, owing to painstaking observance of the above details; and although half of the uterus was removed and adhesions were numerous, calling for many ligatures and frequent use of the cautery, yet convalescence was uncomplicated and speedy.

Dr. Goodell remarked that the quotation in his paper to which exception had been taken, referred to Mr. Tait. It was taken from a paper read last autumn before the American Gynæcological Society by Dr. Sutton, who was with Mr. Tait three months. He (Dr. Goodell) had seen about a dozen ovariotomies in Great Britain, and only one was a difficult case, and in that the patient died. There he had

seen patients refused on account of their age, while in this country they are not. Dr. Goodell had operated successfully in patients aged respectively 60, 61, 62, 64, 65, and 67 years, and some one in this city had a successful case in a patient over 83. Dr. G. had once operated upon a patient 76 years of age, of a long-lived family. This was before the days of antisepsis, and the patient died. He believes that minute attention to details is the chief element of success. One important point is to make the abdominal incision sufficiently large to see every adhesion as it is separated, and to ligate or secure immediately every bleeding point. This requires a courage which it took him years to attain. He always observes Spencer Wells' method of placing a flat sponge beneath the abdominal walls when introducing the closing sutures. He does not like wire, but always uses carbolated silk sutures, each eighteen inches long. After all have been placed, the ends are twisted together into one strand on either side, and caught in the bite of a pressure forceps. The lips of the incision are then widely separated, and a final search is made for any oozing, leakage, or accumulation of serum. They are then rapidly tied and the wound dressed. This final toilet of the peritonæum cannot be made when wires are used. He now believes in the use of a drainage tube, but he had hard work to bring himself to the point of accepting it, as he still looks upon the tube as a foreign body, a necessary evil. He had once seen death caused in a healthy man by the simple perforation of the peritonæum, without wound of the intestine, by a small stilette, and this had made him fearful of the effect of the presence of a drainage tube. But he now considered that the peritonæum, in the case of an ovarian cyst, has by thickening and attrition lost much of its vulnerability, and does not resent slight causes of irritation. He occasionally resorts to the actual cautery at a black heat to stop bleeding from torn adhesions, but he prefers the pressure forceps, the ligature, or the application of Monsel's solution. He thinks there may be some truth in Dr. Smith's idea concerning the effect of the low temperature of the operating and of the convalescent room. He was struck with the absence of ill results in one operation in London by Dr. Bantock, of which he had been a spectator. The day was cold, damp and foggy, and the operating room was chilly, the windows being open, but the patient promptly recovered. One case of his own, in which the extreme emaciation and prostration of the patient forbade postponement, was operated upon in severe winter weather; the steam pipes at the hospital had been frozen over night, and although they had been thawed out, the temperature of the operating room was only 54°. In this case the cyst had contained colloid matter, and had burst spontaneously; all that could possibly be removed was scooped, sponged and washed out. Much remained behind, yet the patient recovered and afterward became quite fat. This operation was performed three years ago; both ovaries were removed, but another tumor can now be discovered in the abdomen. The patient being fat, and also very sensitive, it is not possible to determine accurately its character, but he hopes it is a pedunculated fibroid of the uterus, and not a malignant tumor.

Dr. Dawson requested Dr. Goodell to give his opinion respecting the management of the drainage tube, and of the importance of the spray.

Dr. Goodell, when operating in private houses, has begun to dispense with the spray. Carbolic acid spray poisons some patients, and he, being afraid of it, only uses it when he does not consider it safe to omit it, as, for instance, in a general hospital, or when there are many spectators present. The year before last he lost one patient from its use; she had contracted kidneys. Only last week, in a case operated on in the hospital of the University, the patient was profoundly affected by it, and was with difficulty restored by means of digitalis, stimulants, etc. When he omits the spray he uses the drainage tube more frequently. If he finds in Douglas' pouch, after the sutures have been placed and the sponges removed, two or three drachms of bloody serum, and the source of this oozing cannot be found, he inserts a drainage tube; and he also uses it in all cases where there has been peritonitis, or when septic symptoms are present from a purulent cyst. Over the mouth of the tube he springs a piece of rubber sheeting, which is folded over a sponge squeezed out of a five per cent. solution of carbolic acid. The sponge is examined and squeezed out every few hours, and the tube moved slightly to clear the openings and allow any accumulation of serum to escape. As soon as a moderate amount of serum escapes without any tinge of blood the tube is removed. This generally happens within forty-eight hours, but in one case it was necessary to allow it to remain five days. He never irrigates the abdominal cavity, but he sometimes introduces the long nozzle of a hard rubber syringe into the tube, and draws out any serum that may have accumulated. When he operates in the country, and leaves the patient in the hands of the family physician, he tries to avoid the use of the drainage tubes as much as possible.

Dr. Dawson had given some attention to the question of the drainage tube. In New York two deaths had recently happened after ovariotomies, and in each case the surgeon had ascribed the fatal termination to the too early removal of the tube. Soon after these unfortunate cases he had operated and been obliged to use the drainage tube; on the second and third days after the operation the serum exuding from the tube was bloody. On the fourth day it was pure serum. The patient was doing well, and Dr. Dawson concluded to let well enough alone, and, with the result in the two other cases before him, allowed the tube to remain. He used a wire with a pledget of absorbent cotton attached to the extremity, to soak out the accumulated serum, and continued to use fresh pieces until they came away clean. The tube was evidently being walled in by a deposit of lymph around it. On the sixth day, after finding very little serum, the last pledget of cotton brought away a little yellow spot that might have been either lymph or pus. That night he discovered another trace of the same appearance, and the microscope showed it to be pus. The next day the discharge was fetid. A

salt-spoonful of iodoform was put into the tube every time it was cleaned, and on the tenth day it was removed, and a roll of absorbent cotton saturated with iodoform was put in its place. This was replaced in a few hours with another, until all signs of pus ceased. The opening closed in forty-eight hours. The patient recovered. He would like to ask if Dr. Goodell had ever regretted removing a drainage tube too early? Is a drainage tube more of a foreign body on the third or fourth day than it is on the first?

Dr. W. H. Parish had recently performed abdominal section for the removal of a fibroma of the uterus. In this case he used a drainage tube, although he was not able to pass it down into Douglas' pouch. On the third day he noticed that the serum escaping from the tube was cloudy and had a slight odor. On the fourth day the odor was quite objectionable, and as the tube had evidently become separated from the abdominal cavity by the formation of a canal of lymph around it, resembling in appearance diphtheritic membrane; he decided to withdraw the tube. He washed out the canal with a two per cent. solution of carbolic acid. The canal soon closed and there was no return of the offensive odor.

Dr. Goodell could not recall the loss of a case after the removal of a drainage tube. He has had, however, a number of deaths while the tube was still in position, but that meant simply that the cases were complicated and difficult ones. Was not the tube itself the cause of the pus in Dr. Dawso· 's case? Air containing germs was of course admitted into the tube in the cleaning out process, and these germs would cause decomposition of the lymph. Might not also the tube, acting as an irritating foreign body cause pus? He introduces a stitch in such a manner, beyond the drainage tube, as to make tension of the skin around the tube, and this closes the opening as the tube is withdrawn. He has occasionally followed the removal of the glass tube by the introduction of a rubber one of smaller caliber, but he has discontinued this practice, believing the glass tube to be the least irritating.

Dr. W. H. Baker reported for Dr. Walter F. Atlee a case of abdominal section. Mrs. E. C., of Erie, Pa., was brought to this city by Dr. Edward Cranch. She was forty-five years of age, married, but had had no children. Her menses were regular and very abundant. She was a stout woman, in excellent health. Four years ago she first noticed the tumor in the center of the abdomen. Dr. C. reports that the probe enters the womb the normal distance only.

Diagnosis.—A multilocular cyst with thick walls and very glutinous liquid, or a fibroid tumor of the uterus. The sense of fluctuation was not distinct.

Operation.—Feb. 4, after the usual preparation, cut down, found a solid tumor, opened it, took out as much as possible of the contents, and got out the envelopes; the incision was about five inches in length. The tumor grew from the fundus of the uterus. It was transfixed, tied and dropped. The patient never rallied after the operation, and died on the 6th of shock. There was no hæmorrhage. The operation was all over in twenty-five minutes.

Dr. R. P. Harris saw the patient prior to and assisted in the operation. The lady had an appearance of health, was quite robust, and there was nothing in the contour or expression of her face indicative of ovarian cystoma. In a conversation with her sister and family physician, he learned that the diseased growth was first noticed by this sister, who remarked upon the central prominence of the abdomen of the patient, who was at the time lying on her back on the floor, engaged in playing with a little child. When the attention of the patient was directed to the fact that her abdomen presented a central elevation even when flat upon her back, she readily detected the presence of something abnormal. Dr. Harris remarked to the physician that the history of the case indicated the existence of a tumor at the fundus uteri. When the morbid growth was exposed it did not present the appearance of an ovarian cyst; neither did percussion indicate the presence of fluid prior to incising the abdomen, except by a surface wave. There was no wave transmitted from hand to hand. The surface wave was found due to some ascitic fluid. As no fluid escaped by tapping, the tumor was opened and its contents torn away in pieces, so as to reduce it sufficiently, when it was drawn through the wound, ligated at its union with the fundus uteri, and cut away. During the shelling process a considerable loss of blood took place, and the appearance of the patient was that of great prostration. The tumor had no pedicle, being sessile in its attachment to the uterus.

W. H. H. GITHENS, Secretary.

STATE MEDICINE.

REPORT OF THE FIRST MEETING OF THE OHIO STATE SANITARY ASSOCIATION.

The first annual meeting of the Ohio State Sanitary Association was held in the Board of Trade room, Columbus, Thursday morning, Feb. 14. The meeting was called for ten o'clock, but it was nearly an hour later when Dr. J. F. Baldwin, of Columbus, rapped for order, and nominated Dr. Wm. Morrow Beach, of London, as temporary chairman. By this time about twenty members had come in, the high water having detained many; but before moving adjournment, the room was quite comfortably filled with physicians and scientific men from all over the State. The object of the meeting was to educate the peopeople by the diffusion of a more thorough knowledge of the laws of health, and the best means to be adopted for the prevention of all preventable diseases, and, finally, the securing of proper and wise legislation for the support of the same.

After the selection of Dr. Beach as temporary chairman, Rev. Dr. W. E. Moore, of the Second Presbyterian church, led in prayer, and Dr. R. Harvey Reed, of Mansfield, was chosen as temporary secretary.

In accordance with arrangements, Dr. Baldwin delivered an address of welcome, in which he re-

ferred to the sad effects of the sewerage system of this State upon the public health, and set forth a number of important topics which he deemed of importance, and which he thought should receive the attention of the student of sanitary science.

The response to Dr. Baldwin's address was made by Prof. John Simpson, PH.D., Superintendent of Mansfield Public Schools. He advocated a more thorough and general education in sanitary science, believing that a more widespread knowledge of hygiene would have a wholesome effect on the public health, and would prevent many common abuses. "Were a sound body the rule instead of the exception," he said, "the condition of the race would be materially improved in this age of stupendous progress."

The Chair, at the close of the address, appointed the following Committee on Permanent Organization: Drs. J. F. Baldwin, Columbus; X. C. Scott, Cleveland; E. H. Hyatt, Delaware; G. S. Franklin, Chillicothe; C. A. Lee Reed, Hamilton.

Dr. Beach, of London, temporary chairman, read an interesting paper on the "Importance of Sanitation." The production displayed a very intimate acquaintance with the history of sanitary science. It reviewed at considerable length the history of the plagues that swept over Europe during the Middle Ages, giving a general idea of their severity, and some of the mediums through which pestilence is spread. Dr. Beach is not in favor of fumigating bedding and other clothes after the poison of pestilence has once been retained in them, but thinks the physician should enforce positive sanitary precautions by having the articles burned. The history of quarantining against the epidemics of cholera and yellow fever was run over, and the doctor expressed himself as in favor of it. The paper closed with an eloquent peroration.

On motion of Dr. Reed, of Mansfield, it was decided to give a reasonable time after the reading of each paper, for the general discussion of the same.

Dr. C. M. Finch, of Portsmouth, being absent on account of the high water, the "Plea for the Organization of a State Board of Health," which was to have been presented by him, was necessarily omitted.

Dr. J. F. Baldwin read a letter from Dr. James E. Reeves, of Wheeling, Secretary of the West Virginia Board of Health, who was expected to address the present convention, but who said that he must cancel the engagement, as he was needed at home to help take care of the people rendered destitute by the flood, at the same time expressing his regrets at being unable to be present at the meeting, and wished it abundant success.

On motion of Dr. G. S. Franklin, Dr. Reeves' letter was accepted, and the regrets of the Association extended to him in return.

A valuable paper was presented by Dr. G. S. Franklin, of Chillicothe, on the subject of "Abattoirs," in which he expressed himself as in favor of placing the control of all slaughter-houses in the hands of Boards of Health.

The Association then adjourned until 2:30 P. M.

The first thing on the programme for the afternoon was a paper on "Drainage and Water Supply," by Professor E. H. Hyatt, M.D., of Delaware. Dr. Hyatt, however, said he would willingly give his time to the discussion of the Scott bill, and the society accepted the offer.

Dr. Scott, of Cleveland, the champion of the bill, then took the floor, and explained that it was a bill "to establish Boards of Health and Medical Boards of Examiners and Licensers, and regulating the practise of medicine and surgery in the State of Ohio, and defining the powers and duties of such boards," which he read, section by section, after supplying most of the members with a copy of the same. A spirited discussion followed, the unanimous sentiment, however, seeming to be in favor of the passage of the bill. Those gentlemen taking part in the discussion were Prof. E. H. Hyatt, of Delaware; Dr. Conklin, of Dayton; Dr. McCurdy, of Mahoning County; Dr. Reed, of Hamilton; Dr. Baldwin, of Columbus; Dr. Silver, of Sydney; Dr. Reed, of Mansfield; Dr. Beardsley, of Ottawa; Dr. Beckwith, of Cleveland; Dr. H. J. Sharpe, of London; and Dr. Franklin, of Chillicothe. No one spoke against the bill, but a number of suggestions as to how it might be changed with benefit were offered.

Dr. McCurdy feared that too much power might be given to the State Board of Health; that they might interfere with the work of local boards in matters of ventilation of public buildings, etc., and with the mine inspector in the matter of ventilating mines. It was the bill, however, which he had seen.

Dr. Reed, of Hamilton, suggested that, as the bill as now drawn up provides for a board who shall have the duties and powers of a Board of Health and of a Board of Examiners, the matter might be divided, and the question of constituting the two bodies submitted separately. This objection and another which was made were met with the answer that the Board of Medical Examiners would more than meet their expenses, and that part of their expenditure as a Board of Health would also be covered, thus entailing less cost upon the State than any other board.

Dr. Baldwin suggested that it was not desirable to create any more boards than there now are, and that the County Infirmary Board, receiving pay, could be pressed into service in the local organizations. The infirmary physician could then be utilized as the officer of the board.

Dr. Scott raised a counter objection that county physicians are generally "cheap Johns" of the profession, and would not be desirable in this connection.

Dr. Reed, of Mansfield, referred to an objection which he had heard raised against the bill, in that probably the disciples of one school would, if on the board, be compelled to sign certificates of applicants belonging to the other school. He suggested that when a new school man appeared for examination his certificate, if he passed, should be signed by the new school men alone on the board, and if an old school man by the members of he old school.

To this Dr. Beckwith, of Cleveland, made a perfect answer, saying that he, as a homœopath, was not afraid to stand the examination of the board, and

that he did not desire anyone who was afraid to stand the test to be allowed to practice as a member of his school.

There was considerable talk over this subject, and the matter was finally settled by Dr. Scott stating that it was the intention of the bill to require the signatures of the President and Secretary of the board to the certificates.

On motion of Dr. Reed, of Mansfield, it was decided to close the discussion, and appoint a committee to confer with Dr. Scott in making the necessary amendments to the bill, which should include the Chairman as a member of said committee, which consisted of the following gentlemen: Drs. Beach, of London; Scott, of Cleveland; Conklin, of Dayton; Beckwith, of Cleveland; Beardsley, of Ottawa; Baldwin, of Columbus; Franklin, of Chillicothe; Jones, of London, and James Allison, Esq., of Cincinnati.

Dr. Hyatt having given way to the discussion of the Scott bill, it was decided to have his paper in the morning.

The regular business was then taken up, and Dr. John McCurdy, of Youngstown, read a paper on "The Sewerage and Water Supply of Youngstown." He said the Youngstown people are using the Holly water system, and the large brick sewers, which (the sewers) have cost them nearly $200,000, and, notwithstanding this great expense, were a failure from a sanitary point of view. In the general discussion, the small sewer, which could be easily flooded, was unanimously considered the best, and which in towns of 10,000 seldom ever needed to be over 6 inches, except in the mains, which rarely needed to exceed 18 inches, and could be put in with much less expense.

Mr. James Allison, a delegate from the Master Plumbers' Association, of Cincinnati, read a voluntary paper on "The Plumber in His Relation to Sanitary Progress as Viewed from the College of Practice." This paper was one of the best of the meeting. The convention, after hearing Mr. Allison's paper, adjourned until evening.

The evening session was held in the House of Representatives, commencing at 8 o'clock. There were about 100 persons present, among them being a number of members of the General Assembly. Dr. Beach took occasion to return thanks for the use of the hall, and called for the first paper of the evening, the opening by Prof. Starling Loving, M.D., of Columbus, of a discussing on the resolution, "That Legalized State Sanitation has Become a Necessity in the State of Ohio for the General Protection of its Citizens." He held that thousands of deaths occur annually from preventable diseases, and referred to the Secretary of State's Report to substantiate his statements. These deaths, he argued, were a direct loss of many millions of dollars to the State, and some legislative action should be taken to prevent them. He favored the appointment of a board of competent physicians to examine all medical college students, and also a State Board to take charge of sanitary affairs.

Discussion of Dr. Loving's paper was open, and Dr. John McCurdy, of Youngstown, and Dr. Reed, of Mansfield, took part.

Prof. W. J. Conklin, M.D., of Dayton, read a paper on "The Influence of Public Schools on Brain-Building," which did not elicit discussion, from the fact that the statements coincided with the views of most members present.

The Association, after the reading of Dr. Conklin's paper, adjourned to meet in the Board of Trade rooms at 9 A. M. Friday.

The meeting was called to order by the President at 10 A. M., after which the Committee on Permanent Organization made the following report: President, Wm. Morrow Beach, M.D., London; First Vice-President, Prof. Edward Orton, Columbus; Second Vice-President, Prof. Nelson, Delaware; Third Vice-President, Hon. L. D. Brown, Hamilton; Secretary, R. Harvey Reed, M.D., Mansfield; Treasurer, Prof. John Simpson, Mansfield. Executive Committee, which, ex-officio, includes all the Presidents and Secretary, together with Prof. Starling Loving, M.D., Columbus; H. D. Beckwith, M.D., Cleveland; Prof. W. J. Conklin, M.D., Dayton; Prof. E. H. Hyatt, M.D., Delaware. Committee on Publication: R. Harvey Reed, M.D., Mansfield; J. F. Baldwin, M.D., Columbus, and Geo. A. Collamore, M.D., Toledo. Committee on Legislation: Wm. Morrow Beach, M.D., ex-officio, London; X. C. Scott, M.D., Cleveland; C. S. Van Pelt, M.D., Toledo; S. C. Minor, M.D., Cincinnati; J. R. Flowers, M.D., Columbus, and C. M. Finch, M.D., Portsmouth.

The report of the Committee on Permanent Organization was adopted, and the committee discharged.

The committee also reported a constitution and by-laws, which was read and adopted. The name of the organization is to be "The Ohio State Sanitary Association," and its object the general advancement of sanitary science, and the encouragement and promotion of local organizations throughout the State. The membership will be of two kinds, active and honorary. Active members shall form the body of the Association, and shall be selected with special reference to their interest in sanitary and allied studies. Honorary members shall be selected with reference to their general interest only in the work in hand. The association will meet at least once a year in the month of February, and unless some other city is mentioned it will meet in Columbus.

Prof. Curtis C. Howard, professor of chemistry in the Starling Medical College, read a paper on impurities and adulterations of milk, the result of a series of examinations of the milk of the Columbus market. The professor thought there was little adulteration in the way people generally suppose. As for chalk, it is insoluble, and if mixed in clear water it will be turbid for a time; but after standing a while all the chalk will settle and the water will become clear again. So also with brain matter, which some claim to have found in milk; it could not be put in without spoiling the whole of the milk. Water, however, may be added *ad infinitum*, and the quality of the milk will be in inverse proportion to the amount of

water used. The professor exhibited a chart which showed the result of his work.

The next paper was read by Prof. D. N. Kinsman, M.D., of Columbus, on "Some Reasons for the Establishment of a Board of Health." He called attention to the amount of disease arising out of ignorance of the causes of disease. Every section of country has its particular industry and each industry has its peculiar diseases. How to prevent them should be the work of the board. He referred to the importance of obtaining accurate vitality statistics, and thought a good board could do this work in a way not done as yet.

Dr. S. H. Smith, of Warren, was on the programme to read a paper on "Diphtheria," and Dr. J. W. Craig, of Mansfield, a paper on "Tobacco from a Sanitary Point of View." Both of these gen- were absent, and, on motion, a paper on "The New Fashion," by Prof. C. A. Lee Reed, M.D., of Hamilton, which had been assigned, was read in the place of these. The paper referred to the absence of athletic sports among the people in general, and hailed what seems to be the approach of an era when the pell-mell, hurry-skurry of American business life will be broken into a fair amount of refreshment and rest.

Dr. Lew Slusser, of Canton, read an able essay on "Vital Statistics," a paper illustrating the great need of correct vitality reports.

The remaining part of the morning session was taken up by Dr. Beckwith, of Cleveland, who read a paper on "Sewers and Sewer Gas." After fixing the time for hearing the paper of Prof. Orton for the first hour of the adjourned session, the Association adjourned.

F. H. Darby, M.D., of Morrow, who had prepared a volunteer paper, but could not be present, sent his regrets along with his manuscript. The paper was read by the Secretary in the afternoon. The subject of the essay was: "Blood-Poisoning from a Sanitary Standpoint." The only other paper on the programme was that of Prof. Edward Orton, of Columbus, on "What shall be done with our Sewerage and Garbage?" which at the special request of Prof. Orton was laid over until next year, as recent illness had prevented him making the desired preparation on such an important subject.

President Beach made a few fitting remarks, in which he expressed his surprise at the unexpected success of the meeting, and the great interest manifested by all in attendance, together with the high quality and marked preparation shown in the numerous papers, which were generally followed by spirited and interesting discussions.

After the President's address it was moved by Dr. Reed, of Mansfield, to adjourn, to meet February next, in Columbus, at a time to be designated by the Executive Committee.

WM. MORROW BEACH, M.D., Pres., London, O.
R. HARVEY REED, Sec., Mansfield, O.

ACCORDING to Dr. Billings, of 1,000,000 colored infants born (in Baltimore) one-half will have perished before attaining the age of two years.

HEALTH IN MICHIGAN.

Reports to the State Board of Health, Lansing, by observers of diseases in different parts of the State, show the principal diseases which caused most sickness in Michigan, during the week ending January 5, 1884, as follows:

NUMEER OF OBSERVERS HEARD FROM, THIRTY-NINE.		For preceding week.
DISEASES ARRANGED IN ORDER OF GREATEST AREA OF PREVALENCE.	Per cent. of observers who reported the disease present.	Per cent. of observers who reported the disease present.
Neuralgia	77	65
Bronchitis	62	70
Influenza	59	63
Rheumatism	59	60
Intermittent fever	54	63
Tonsillitis	54	63
Consumption, of lungs	51	53
Pneumonia	44	44
Remittent fever	33	30
Erysipelas	26	26
Whooping-cough	23	21
Diarrhœa	23	26
Diphtheria	18	14
Inflammation of kidneys	15	26
Inflammation of bowels	13	12
Typhoid fever (enteric)	8	9
Scarlet fever	8	9
Dysentery	8	0
Measles	5	7
Inflammation of brain	5	7
Cerebro-spinal meningitis	5	0
Puerperal fever	5	5

For the week ending January 5, 1884, the reports indicate that neuralgia and dysentery increased, and that inflammation of the kidneys, tonsillitis, intermittent fever, and typho-malarial fever decreased in area of prevalence.

At the State capitol, the prevailing winds during the week ending January 5 were northeast; and, compared with the preceding week, the temperature was considerably lower, the absolute humidity less, the relative humidity and the day ozone considerably more, and the night ozone the same.

Compared with the average for the month of December in the preceding six years, diphtheria, remittent fever, pneumonia, consumption, and typho-malarial fever were less prevalent in December, 1883.

For the month of December, 1883, compared with the average of corresponding months for the five years, 1879-1883, the temperature was slightly higher, the absolute humidity the same, and the relative humidity and the day and night ozone less.

Including reports by regular observers and others, diphtheria was reported present during the week ending January 5 and since at fourteen plaaes, namely, Adrian township, Burt, Calumet, Delta, Detroit, Farmington, Grand Rapids, Holly, Ithaca, Monroe, Northville, Niles, Owosso, Pontiac. Scarlet fever at nine places, Adrian township, Allen Creek, Colfax, Detroit, Grand Rapids, Jefferson, Monroe, Orleans, Washington. Measles at two places, Detroit and Owosso. Small-pox was reported in Orleans township, January 2, 1884.

HENRY B. BAKER, Secretary.
Lansing, Jan. 9, 1884.

DOMESTIC CORRESPONDENCE.

TO THE EDITOR OF THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION:

In the JOURNAL for February 16, 1884, there is an editorial on the subject of the new medical law of Virginia. The writer of the editorial says that one of the "legitimate objects to be accomplished by legislative enactments for regulating the education and practice of the medical profession, should consist of a simple provision by which the certificates of similar bodies in other States should be recognized, so as to maintain a comity of rights and interests between the States."

That such a recognition of the certificates issued by the Board of one State by the Board of another would be very desirable, there can be no question; but so long as the Boards differ so widely in their requirements as they now do, I do not see how such recognition could be made. For example, in many of the States all that is required is that the candidate should be a graduate of some respectable medical college, the question of respectability being left to the discretion of the Board. In other States—California, for instance—there are two, or possibly three, examining Boards, one representing the regular profession, one homœopathic, and probably one eclectic, though I am not sure on this latter point. When in California a few years ago, I was told by a member of the regular Board that most incompetent men had been passed by the homœopathic Board of that State. Now, would it be reasonable or proper for the Alabama Board, for instance, which is admirably constituted, to "recognize" the certificate of a physician coming from California, without subjecting him to an examination?

As a member of the committee which framed the Virginia law, I do not hesitate to say that our object was not only to put down notorious quackery, but to check that more dangerous, because less conspicuous, ignorance which is concealed behind a diploma of some medical college whose standard is wretchedly low. To do this it was necessary that every applicant for practice, whether a graduate or not, should be required to pass a satisfactory examination before a board of examiners, and it was with reference to this point that the committee had most trouble, an effort being made to allow any man having a diploma from any college to practice without standing an examination.

The medical colleges in the United States are so numerous now, and the competition for students so great, that the temptation to lower the standard required for graduation in order to attract students, becomes almost irresistible, and in view of this fact, the desirability of having an examining board in each State entirely independent of the colleges becomes apparent. Then, the next step will be to have some concert of action among the boards of the different States, so as to make the standard required by the different boards correspond. If many of the States will do this, then the colleges will be forced to raise their standard for graduation.

I hope to be able to bring this matter before those interested in the subject at the next meeting of the American Medical Association, and if you approve of the plan, I trust you will call attention to it through the columns of the JOURNAL.

Very respectfully &c.,

WM. C. DABNEY, M.D.

Charlottsville, Va., Feb. 22, 1884.

NOTE.—In the editorial alluded to in the above letter, we meant by the words "similar boards in other States," only such as were constituted on the same basis and exercised the same powers and duties. We do not regard a State Board of Examiners, who are required to issue licenses to practice to any party who may possess a college diploma, as in any sense "similar," to the board provided for by the Virginia law. Indeed, such boards are practically little more than registration offices, and the laws establishing them are hardly worth the paper they are printed on. —EDITOR.

FOREIGN CORRESPONDENCE.

PARIS, FEB. 8, 1884.

Prof. Germain Sée and Dr. Bochefontaine, his "chef de laboratoire" at the Hotel Dieu, lately undertook a series of experiments as to the physiological action of the sulphate of quinine, which were afterward compared with the results obtained clinically at the hospital. The following is a summary of their paper on the subject which was read at a recent meeting of the Academy of Sciences:

In the healthy human subject, the sulphate of quinine lowers the temperature to a very insignificant degree; the oxidations, however, undergo marked diminution; the pulse becomes slower, and the blood-pressure is lowered. In the typhic patient, the temperature is lowered after the first gramme, and particularly after the second gramme of quinine; it falls one degree and a half in six or eight hours, and the effect persists for a day and a half. The oxidations diminish in the same proportion. The pulse-rate becomes much slower than in the physiological state. The blood-pressure, which falls constantly under the influence of hyperthermia, rises to the normal condition; there is, besides, increase of the contractile energy of the heart. The sulphate of quinine alone preserves the force of the heart and increases it. Moreover, as it diminishes the febrile heat directly, without previously increasing the combustion, as is the case with cold baths, it stops dicrotism, and the arterial tension, which was considerably diminished, resumes its normal strength. It is therefore a powerful antipyretic. If, in the physiological state, it diminishes vascular pressure, it is because it does not produce a marked diminution of the normal temperature.

A very interesting exhibition of the wonders of the deep in the form of submarine animals and plants, is about to be opened at the Jardin des Plantes, which were collected by M. Alphonse Milne-Edwards during his exploration cruise along the western coast of

Africa. About the beginning of last year, M. Milne-Edwards and other naturalists who accompanied him started in a ship named "Talisman," with all the necessary engines, apparatus and instruments for soundings in the depths of the ocean, and which were placed at their disposal by the French Government. The explorations were pushed to 6,000 meters, or about 19,686 feet. They lasted several months, which enabled them to collect the most curious specimens of the fauna and flora of the great deep. Specimens of vegetables and of animals absolutely unknown to the present time, were also collected. All the different specimens have been well preserved, and will be exposed in a few days, as I have just stated. Before the opening of the exhibition, however, M. Milne-Edwards thought proper to give the result of his exploration in a most interesting communication he made at the Academy of Sciences. At the conclusion of the paper, the reading of which was listened to with intense interest, M. Boussingault, one of the oldest members of the Institute, was heard to exclaim: "And yet, for the last 30 years or more, I have been teaching that life was not possible in the depths of the ocean."

In 1873, a law was passed for the repression of drunkenness in the streets, and with the view of putting a check on the progress of alcoholism in this country. It was made applicable not only to the miscreants, but to the wine merchants, who allowed, or rather encouraged people to get drunk in their shops. The application of this part of the law was not always easy, as the drunken persons did not always recollect where they had been drinking. The police authorities have, therefore, resolved to punish severely all wine merchants whose shop any person may leave in a state of intoxication.

The following interesting report, drawn up at the office of the Minister of the Interior, has just been published in the *Journal Officiel*, showing the number of births, marriages and deaths during the year 1882. From this report it is seen that at Paris there have been 108 deaths daily, and as many or nearly as many births, or an average of 6 deaths and 6 births for each arrondissement. There were 200 marriages weekly, and it is stated that 20 per cent. of married couples have no children; 10 per cent. have more than 10; 30 per cent. have from 5 to 10; 20 per cent. have from 2 to 5; and the others have only 1 child. In the same proportion of marriages there are 15 that obtained legal separation (divorce not being lawful in this country) and it is in the first years of marriage that applications for separation are the most numerous. After fifteen years of conjugal life the applications become less frequent.

The aquarium which was established in the grounds of the Trocadero during the last International Exhibition held in Paris in 1878, has been considerably enlarged and improved. It is well provided with salt and fresh water fish, and arrangements have been made for a complete laboratory for experiments, and a staff of professors who are to give public and gratuitous lectures on pisciculture.

The late Dr. Depaul, Professor of Clinical Obstetrics in Paris, and who died a short time ago, has bequeathed his splendid collection of pathological specimens and obstetrical instruments to the Faculty of Medicine of Paris. A. B.

NECROLOGY.

Ford, Charles Mason, M.D., of Washington, D. C., was born in or near Troy, New York, May 15, 1840; died of rheumatic fever at his residence, 150 Pennsylvania Avenue S. E., February 15, 1884.

He was the son of John N. Ford, of Troy, N. Y. Having received a good academical education he, at an early age, began the study of medicine with Dr. Alfred Watkins, of Troy. He attended lectures and graduated M.D. at the University of Pennsylvania in 1861. His graduating thesis was written on "Scarlatina." Shortly after leaving college he was appointed assistant-surgeon in the Navy, and assigned to duty with the Huntsville blockading squadron, under the command of Capt. Ciciro Price. He served with reputation, but from exposure contracted rheumatism, which caused him to resign, and return home to recover his health. In a few months after leaving the Navy he came to Washington, and was at once commissioned assistant surgeon of volunteers, and assigned to duty at "Clifton Hospital," situated on the heights to the north of t he city of Washington. After some 9 months' service at this hospital, Dr. Ford was assigned to special duty at the "old Capitol Prison," where he remained until that famous institution was abolished. With the consent of the officers in charge he opened an office for private practice in the vicinity of the prison, and near where he finally located when he retired from the military service. As soon as permanent settlement in Washington was determined, he became associated professionally with Providence Hospital, and for over 14 years he served on the surgical staff of that institution. At a special meeting of the Medical Society of the District of Columbia held Feb. 16, to take action and adopt a minute expression of the feeling of the Society on the death of its member, Dr. C. M. Ford, Dr. S. C. Busy paid an eloquent tribute to his character and memory. Other members spoke in the same strain. It is to be regretted that their remarks were not reduced to writing.

Dr. Ford Thompson, who had been long associated with him in Providence Hospital, and knew intimately his character and skill as a surgeon, reduced his remarks to writing, and spoke as follows: "Dr. Ford was remarkably endowed by nature with many of the qualities which make the successful physician and surgeon, as well as the most agreeable and lovable companions. Gifted with a memory almost phenomenal in its retentiveness, he was able to keep abreast with the advance of medical science almost without an effort; and combined with this he possessed judgment to a degree that often appeared intuitive, and made his advice of the highest value to his friends as well as to his patients. He was well grounded in the essential branches of his profession, and his thorough knowledge of anatomy gave him a secure foundation

for the superstructure of surgery, for which he early evinced a decided aptness. Indeed, I have rarely seen a man upon whose judgment I would more implicitly rely than his. With a comprehension of the possibilities of the vast field of surgery he combined an insight of complications and extraneous influences which made his opinion of a case of peculiar value, upon the many occasions it has been sought by me. As a practitioner of medicine I believe he possessed the same eminent qualities to an equal degree in all the departments, for I have heard no other opinion from those who have had the fullest opportunities of judging in this field of his labor." Dr. E. C. Hagner, who had also reduced his remarks to writing, in speaking of Dr. Ford's personal and social qualities, said: "Dr. Ford had one of the most lovable dispositions that I have ever known. His heart had a southward look, and was always open to the sun. When his friends met him, however weary and exhausted they might be, it was a rest from the cares of this weary life to bask in the sunshine of his joyous nature. Quick-witted, sympathetic, large-hearted, generous to a fault, he grappled his friends to him with hooks of steel. The electricity of his temperament was indeed wonderful. I have met him when I knew the case to be visited was one which taxed every energy of his mind and sympathy of his heart, and when I expected him to show in face and manner some evidence of the strain he was undergoing. He had a most complete control over his feelings. I have marveled at the buoyancy of his greeting on such occasions, the readiness of his smile and laugh. He could beguile the time with merriment and almost boyish fun, but the moment the patient's threshold was reached the transformation of manner was complete; the strong man was there, the wise and vigilant physician had assumed control of the case, and his tender, soothing voice was heard comforting and consoling. It was no simulated sympathy that this huge man, with a woman's heart and the frame of a Hercules, gave to his patients. In the sick-room upon his brow was written 'Duty,' and all the genial elements of his nature were fused into a tender solicitude, that won the patient's confidence and gave assurance of the trust in his skill." Dr. Ford, although having a preference for surgery, had, nevertheless, a very large general practice, scattered over the eastern half of the city; and although fond of social life, was dilligent and conscientious in his attendance upon his patients. His services, too, were given freely to the poor as well as to the rich.

For some years Dr. Ford was physician to the Washington Asylum, or Almshouse, and at the time of his death he was surgeon to the Baltimore and Potomac railroad, and to the Washington and Fredericksburg railroad. He was a member of this Medical Society and also the Medical Association of the District of Columbia, and was one of the original members of the Clinico-Pathological Society of the District of Columbia. He was a delegate to the American Medical Association from the Medical Society of the District of Columbia in 1865, and attended in 1866, 1868, 1870, and 1880. Dr. Ford was an honorary member of every military organization in the District. He was at the time of his death a member of Lafayette Lodge, No. 19, F. A. A. M.; Lafayette R. A. Chapter, No. 5; and Columbia Commandery, No. 2, Knights Templar. Among all his Masonic brethren he was very much beloved, and no public occasion was deemed complete without his genial company. Dr. Ford was married in 1862 to Miss Ives, who bore him five children, two of whom with their mother survive. His domestic life was a happy one, a devoted husband and affectionate parent, and was fully reciprocated. His funeral is to take place on Tuesday, 19th inst., and the interment will be at the Congressional cemetery, where three of his children are buried. His lodge, chapter and commandery of Knights Templar will bury him with full Masonic honors; and it is announced that all the military organizations to which he was attached will join in the funeral pageant. J. M. T.

HUGHES, THOS. M., M.D., died at the residence of his mother, near Amiprille, Rappahannock county, Virginia, Jan. 29, 1884, in the 28th year of his age, of phthisis pulmonalis.

Dr. Hughes graduated from the College of Physicians and Surgeons, Baltimore, Md., in 1879, and after devoting a year to hospital practice at Bay View, began the practice of his profession in connection with Dr. John A. Adams, at Amiprille, who dying in January, 1882, the subject of this notice was required to assume the responsibilities of a large country practice, and right nobly has he discharged the duties thus devolved upon him. It has never been the fortune of the writer to see a young physician acquire the full confidence of a large and steadily increasing patronage so completely, nor to know one more generally beloved and esteemed by his professional brethren.

He was elected a Fellow of the Northeast Virginia Medical Society in 1881, of the Medical Society of Virginia in 1882, and was a delegate to the American Medical Association in 1883.

Although modest and retiring in disposition, he was accomplished in his profession, and availed himself of every opportunity of advancing its interests.

In his death the community has lost one of its most useful citizens, the medical societies to which he belonged, and the profession at large, a useful and promising member. A. H.

MISCELLANEOUS.

INDIANA STATE SANITARY CONVENTION.

SEYMOUR, IND., Feb. 15, 1884.

DEAR SIR:—You are respectfully invited to attend and participate in the labors and deliberations of the First Convention of the Indiana State Sanitary Society, to be held at the city of Seymour, on Wednesday and Thursday, March 12 and 13, 1884, under the auspices of the Committee on State Medicine of the State Medical Association.

OBJECTS OF THE CONVENTION.

The objects of the Convention are the presentation of facts, the comparison of views, and the discussion of methods relating to the prevention of sickness.

At each session of the Convention, there will be addresses or papers on subjects of general interest pertaining to the public health, each paper to be followed by a discussion of the subject treated upon. The papers are expected to be original contributions.

ADDRESSES AND SUBJECTS OF DISCUSSION.

Welcome Address—Hon. Jason B. Brown; Address by the President—Dr. N. N. Shipman.

Among the subjects which it is expected will be presented and discussed are the following:

Sewerage, the Causes of Insanity; Ventilation, Microscopical Examination of Air; Alms-Houses, Contagious and Infectious Diseases; Foods and their Adulterations, School Hygiene: Ice from Impure Sources, Disposal of Waste Water.

Programmes will be issued before the Convention.

The sessions of the Convention will be held at the Reading Room at 9 A. M., 2 P. M. and 7 P. M. of each day. The admission to all sessions will be free, and the public is cordially invited. This being the first of a series of conventions to be held at different points within the State, it is desirable that there shonld be a representative from each county of the State, of those interested in "Sanitation" in the broadest signification.

For further particulars. address the Secretary,

JOHN A. FORSYTHE,
(Editor *Daily Democrat*,)
Seymour, Ind.

NOTE.—All papers read, to be the property of the Convention.

NEW BOOKS.

Calderwood, H. The Relations of Mind and Brain. 2nd edit. 8vo. 540 pp. 12s. London: Macmillan.

Hutchinson, J. The Pedigree of Disease: being Six Lectures on Temperament, Idiosyncrasy, and Diathesis, delivered in the Theater of the Royal College of Surgeons in the Session of 1881. 8vo. 142 pp. 5s. London: Churchill.

MacDonald, J. D. Microscopical Examination of Drinking Water and Air. 2nd edit. 8vo. 7s. 6d. London: Churchhill.

Manson, P. Filaria Sanguinis Hominis, and certain New Forms of Parasitic Disease in India, China, and Warm Countries. Illustrated. 8vo. 10s. 6d. London: Lewis.

Millican, K. The Evolution of Morbid Germs: a Contribution to Transcendental Pathology. Cr. 8vo. 3s. 6d. London: Lewis.

Moore, G. Nose and Throat Diseases. 4th edit. 1s. London: Epps.

Thornhill, M. The Clergy and Vivisection. Post. 8vo. 134 pp. 2s. London: Hatchards.

Warren, J. H. A Plea for the Cure of Rupture. 8vo. 118 pp. 5s. 6d. London: Churchill.

Warren, J. H. A Practical Treatise on Hernia. 2nd edit. 8vo. 444 pp. 21s. London: Churchill.

Welch, F. H. Enteric Fever, as Illustrated by Army Data at Home and Abroad. 8vo. 5s. 6d. London: Lewis.

Whitta, W. Elements of Pharmacy, Materia Medica, and Therapeutics. With Lithographs and Wood Cuts. 2nd edit. 12mo. 602 pp. 10s. 6d London: Renshaw.

Wilson, G. A Handbook of Hygiene and Sanitary Science. 5th edit. Cr. 8vo. 10s. 6d. London: Churchill.

Barette, J. De l'intervention chirurgicale dans les hernies étranglées compliquées d'adhérences on de gangrene. Entérectonue et entéremhaphia. 8vo. 150 pp. Paris: Delahage et Lecrosnier.

Comby, J. Les Pleurésies pulsatiles (empyème pulsatile.) 8vo. 53 pp. Paris: Asselin et Cie.

David G. Quelques considérations sur la gangréne typhoide. 8vo. 52 pp. Paris: Davy.

Fiessinger. Notes cliniques: I, la Fièvre pneumonique à Dogneville, près Epinal. II, la Néphrite gravidique et l'accouchement prématuré. 3d fascicule. 8vo. 19 pp. Nancy: Berger, Levrauet et Cie.

Grégoire, H. Del'urée dans le cancer. 8vo. 43 pp. Paris: Davy.

Gueneau de Mussy, N. Clinique médicale. T. 3. Traite thcorique et pratique de la fiévre typhoide on dothiénentérique. 8vo. 740 pp. Paris: Delahage et Lecrosnier. 13 Francs.

Guerin-Carnet. Principales affections de l'oreille, bruits, écoulements surdité, guide explicatif de mon traitment. 2nd edit. 18mo. 122 pp. avec fig. Paris: Ghio.

Karth, A. Etude sur une forme grave d'oreillons. 8vo. 87 pp. Paris: Davy.

Mégrat, C. De la péritonite développée pendant la grossesse. 8vo. 60 pp. Paris: Lamveryns.

Puica, C. Paralysie glosso-labtée cérébrale. 8vo. 51 pp. Paris: Davy.

Tesson, A. Désarticulation de la hanche, observations. 8vo. 12 pp. Angers: Lachése et Dolbeau.

Vigonroux, H. Hygiéne et Médicine des familles. Tablettes du docteur. 2. serie. 18 mo. IV, 320 pp. Paris: G. Masson. 3 fr. 50.

Stobwasser, Carl. Die Hasenscharten auf der Göttinger chirurgischen Klinik vom October, 1875, bis zum Juli, 1882. Inaugural Dissertation. 8vo. 18 pp. Göttingen: Vandenhœck & Ruprecht.

Vorträge über Gesundheitspflege und Rettungswesen während der Hygiene-Ausstellung zu Berlin. 1883. III, 8vo. Berlin: Pasch.

Ziegler, Prof. Dr. Ernst. Lehrbuch der allgemeinen und speciellen pathologischen Anatomie und Pathogenese. Mit einem Anhang über die Technik der pathologisch-anatomischen Untersuchung. Für Aerzte und Studirende. 3 verm. und verb. Auflage. (In ca. 5 Lieferungen.) 1. Lfg. 8vo. 272 pp. Jena: Fischer.

OFFICIAL LIST OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT UNITED STATES ARMY, FROM FEBRUARY 16, 1884, TO FEBRUARY 21, 1884.

Perin, Glover, Lieutenant-Colonel and Surgeon, Medical Director; is granted one month's leave of absence, with permission to apply at Division Headquarters, Missouri, for an extension of one month. (S. O. 16, Dept. of Dak., Feb 9, 1884.)

Wilson, Geo. F., First Lieutenant and Assistant Surgeon; assigned to duty at Fort Walla Walla, W. T. (S. O. 14, Dept. of the Columbia, Feb. 5, 1884.)

CHANGES IN THE MEDICAL CORPS OF THE NAVY FOR THE WEEK ENDING FEB. 23, 1884.

P. A. Surgeon F. S. Nash, detached from the U. S. S. "Dispatch," and waiting orders.

P. A. Surgeon W. H. Rush, detached from the "Minnesota," and ordered to duty on board the "Dispatch."

P. A. Surgeon J. H. Hall to the "Minnesota."

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PUBLISHED WEEKLY.

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ORIGINAL ARTICLES.

THE IMPORTANCE OF SANITATION.

A PAPER READ BEFORE THE FIRST MEETING OF THE OHIO STATE SANITARY ASSOCIATION, COLUMBUS, OHIO, FEBRUARY 14–15, 1884.

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GENTLEMEN OF THE ASSOCIATION:—Being under the impression that we of the medical profession have failed to secure such recognition of the necessity for sanitary laws and regulations, both State and national, as we earnestly feel should be enacted and maintained, the question naturally arises as to the cause of this apathy, or carelessness, or neglect, on the part of our law-making power? I believe that this is chiefly due to the fact that our efforts have been heretofore too often misdirected, by not addressing ourselves to the people more directly, instead of to the officials, who are, in point of fact, only temporary incumbents generally. A legislator, whether in high or low official position, has one desire that is paramount to all others, and that desire is to not be relegated to private life again. He is willing, and even anxious, to do that thing that he believes the majority desire him to do, and one of his chiefest objects of solicitude is to ascertain the present and future drift of popular sentiment among his constituency.

In the presentation of this paper I shall be guided by this idea, and shall address myself toward the laity, and only indirectly to the profession, who are all supposed to be united respecting the needs and demands of a more direct recognition of the importance of sanitation.

From the frequent references to plagues and pestilences in sacred history, it is presumable that the world, in olden times, was seldom or never free from their ravages.

Whilst the armies of Romans and Gauls, under Brennus, were besieging Rome, such a pestilence appeared among them that, weary with burying dead bodies, the survivors burnt them in heaps.

In a time of profound peace, 366 years before Christ, Rome was visited by such a plague, that at its height 10,000 of her citizens died in a day; and during the siege of Syracuse, 277 years before Christ, Livy, the historian, says "the Carthagenian soldiers all perished!"

In another plague, which visited Rome 182 years before Christ, Livy says that the disease made its most fatal ravages amongst the slaves, and that their dead bodies lay unburied along the highways—"their corpses lay unburied, untouched by dogs and vultures, and wasted away by corruption."

Before Christ 126 years, historians relate that in Numidia, in Africa, 800,000 persons perished by pestilence; 200,000 on the seacoast of Carthage and Utica, and 30,000 of the Roman troops; while 1,500 dead bodies were carried out of one single gate in Utica in one day!

In the year 68 of the Christian era, when Rome contained a population of 1,000,000, Tacitus says that by reason of a plague "the houses were filled with dead bodies, and the streets with funerals."

In the year 79—the year following the first recorded eruption of Vesuvius, when Pompeii and Herculaneum were buried—10,000 citizens a day died in Rome.

In the year 88, 150,000 died in Scotland, and 45,000 perished in Wales.

In the year 165 a pestilence overspread the whole earth; but in about the year 250 commenced the most calamitous period mentioned in history, a universal plague, which lasted fifteen or twenty years. It probably had its origin in Ethiopia. One historian says, speaking with reference to the Roman provinces: "The plague in towns and villages followed the Scythians, and devoured that part of the human race which the barbarians had spared." Another says the pestilence "desolated or disfigured the whole earth." Gibbon, the English historian, says "a moiety of the human species fell a prey to this frightful epidemic."

In reference to the plague of 408, Nicepharous, the historian, says: "Almost all Europe perished, and no small part of Asia and Africa."

During the year 680 pestilence was again universal, and Rome was laid waste. "Multitudes fled to the mountains, and the streets of the city were overgrown with weeds and grass."

In the year 1005 commenced another general pestilence, which lasted three years. "Such was the weariness of those who buried the corpses, that the living, before the breath had left their bodies, were tumbled into the graves with the dead."

And again, in 1066, half the population of Egypt and Arabia perished with pestilential diseases.

In the year 1220, the plague was so fatal in Damietta, a city of lower Egypt, on the east branch of the

Nile, that out of a population of 70,000 souls, it is said that only three persons survived!

In about the year A. D. 1345, arose another pestilence of unusual severity, which became universal in its proportions. It is described as being the most general and awful in the history of mankind. It is said to have first appeared in Cathay; thence spreading to Egypt, Syria, Greece, Turkey, Italy, France, Spain, England, Ireland, Holland, Germany, Hungary and the north of Europe. It is estimated that in eight years, half the human species perished! In many cities, nine out of ten perished; and some cities were wholly depopulated. London buried 50,000 in one graveyard. Norwich lost 50,000; Florence 90,000; Lubec 90,000, and Venice 100,000. In Spain, two thirds of the whole population perished, and in the East 20,000,000 are supposed to have perished in a single year. The rights to all property were temporarily relinquished; cattle roamed at will; crops were left to perish in the fields; and houses were tenantless and ownerless, and going to decay in all the known countries of the world.

This pestilence reached to Iceland, with such mortality that the settlement there planted never recovered from the disaster. It invaded Greenland, and the Danish colony there was extinguished, for it has not since been heard from to this day. It swept over plains. Its poisonous breath rested upon the mountain heights. It spared neither age or sex. It was partial to no country or nationality. It seized upon the islands of the sea, and upon fugitives in mid-ocean, and left their vessels to drift without a human occupant or guide.

More than fifty times since the commencement of the Christian era, some of the great cities and capitals of the Old World have had to be repeopled from abroad, by reason of wasting pestilences.

Were all, or even any of these great pestilences within the power of man to avert? or was their universal spread owing to a general pestilential condition of the elements, beyond the power of human kind to localize, or control, or modify? The pestilence that swept over Iceland and Greenland in the 14th century with such devastating effects, is known to have been small-pox; and some of those described long before the time of Christ are recognized very unmistakably as having been of the same characteristic types of local epidemics of the same diseases prevailing to this day.

To ascertain the means for the prevention or avoidance of diseases that are preventable or avoidable, is the special province of the sanitarian.

Let us examine this subject for a little while.

An infectious disease is generally understood to be one that is contracted by direct contact—as *mal Francais*, hydrophobia; and the practice of vaccination furnishes a good example.

A contagious disease is one understood to be propagated without direct contact, as measles, small-pox, Oriental cholera, etc.

An endemic disease is one that arises from a local cause, as a common ague, originating in the excess of malarial poison in that particular locality.

An epidemic disease is where it becomes general in any section of country by reason of its spread from some specific contagious poison, as an epidemic of measles, whooping-cough, etc.

The mediums through which epidemics are spread are first, air; and secondly, water. It is presumable that the great pestilences to which we have alluded were generally the plague, Asiatic cholera, small-pox, yellow fever, dysentery, and typhus fever; although measles, miliary, or the "sweating sickness," angina, diphtheria, scarlatina, and other diseases might rage and have spread as pestilences.

One of the theories upon which sanitary laws and regulations should be founded, is the theory that these and many other diseases have their origin in a specific contagious principle, that will produce that specific disease and no other, and that may propagate itself through the atmosphere for a greater or less limited extent. For instance, small-pox may be contracted by exposure to a case—in the proper stage of the disease—within the limits of an ordinary room. It might be contracted by the poison—the specific contagious poison of small-pox—at the distance of 100 feet or more; but that a distance may be reached at which no possible danger can exist.

The sanitary laws of Moses (Leviticus xiii.) contain the most that is necessary to be known concerning the sanitation in leprosy even to this day.

The theory that is now most generally adopted is that epidemic diseases—and most diseases that are not epidemic—owe their origin and propagation to microscopic animal organisms. For a person to contract the disease, it may be done by contiguity or nearness to one suffering from the disease; by breathing the contaminated air of the room, which poison may come from the breath of the patient; from the sensible or insensible perspiration; from the expectoration; from the ejecta of the stomach; from the excreta of the mammary gland or kidneys; or the dejecta from the bowels. The clothing of the patient, or bedding, or rags, or any textile fabric coming in contact with him or near him; or even window curtains, paper hangings, or other porous fabrics or substances about the room, or any part of the house, may absorb or become the lodging places of the specific poison or microscopic animal organism, fungi, or bacillus; and under favorable surroundings of temperature, exclusion from air, light, heat, and so forth, these substances may retain the specific poison in a state of preservation, capable of producing a like disease in a susceptible subject, for an indefinite length of time. Cats and dogs have been thought capable of distributing these specific poisons by carrying them in their hair.

Things that become vehicles for the preservation of the specific poisons of contagious diseases, as bedding, clothing, rags, and so forth, are called "fomites."

Taking this view of infectious and contagious diseases and their origin, does it not seem plausible that it is possible to utterly annihilate some diseases that are purely and only infectious? Setting aside the possibility that there is no contagious disease that can arise without exposure to an already existing cause,

if the existing cause be removed, the disease is extinguished. This, however, as a theory cannot be looked upon as absolute, as some local idiopathic diseases, as gangrene, metritis, puerperal peritonitis, etc., may become infectious or contagious.

But leading in this direction, supposing we take a case of small-pox as an example. It first becomes the duty of the physician and sanitarian to isolate the patient; then to remove all unnecessary substances near him that can act as fomites; and after his recovery to enforce sanitary measures, such as the inexorable destruction by fire of all such substances as would act as fomites, unless we know that such as are spared can be rendered harmless by baking in ovens or by other means equally as certain.

But, not to digress too far from my special subject, allow me to say that I think the one thing most needed in the furtherance of the objects of sanitary science, is the sustaining sympathy of an enlightened public opinion. This is not only the power which lies behind the throne, but it is the throne itself.

At the time the Crusaders occupied Jerusalem they established outside the city a hospital for contagious diseases, and called it the Hospital of St. Lazarus, and from this came the name of "Lazaretto."

The first quarantine regulation promulgated in any State was by Viscount Bernabo, of Reggio, Italy, in 1374. But it was not till about the middle of the 15th century that any well-defined legal code was adopted; and this was by the little Republic of Venice, Italy, which in 1448, after having become strong enough to cross the Mediterranean with her ships of commerce, and to undertake wars of conquest, and after having suffered from no less than 63 wasting epidemics within six centuries, enacted the first digest of laws known as "the laws of quarantine." And at a later period, this little Republic established the first "board of health," consisting of three noblemen, who were at a later period given the power of life and death, or absolute power, from which there could be no appeal, in enforcing their commands.

England did not establish a regular system of quarantine until 1710; at a time when the plague was ravaging the cities along the Baltic.

The first quarantine in the United States was in the year 1700, when the yellow fever was raging in Philadelphia, and the General Assembly passed a law imposing a fine of £100 on any person landing at that port with an unhealthy vessel. Massachusetts followed in 1701, and the first Congressional enactment was in 1799—"an act respecting quarantines and health laws"—which act is yet unrepealed.

In 1851, an International Congress was called to meet in Paris; and after a lengthy discussion, a set of rules was adopted by the different national representatives present.

The second International Congress was held in Constantinople, upon a call by the French government, in 1865, and since that time, the laws of quarantine have been gradually tending more and more toward a basis conforming with the views of advanced sanitarians. The general rules now prevailing are to prevent the exportation, importation, or spreading of pestilential diseases. The means chiefly adopted are, purification, quarantine, lazarettoes, restriction, separation, seclusion, and lines of circumvallation, or military cordons; and of late years the rules have been extended to include sanitary police against the epidemic diseases of domestic animals. When a ship is about to sail, she is furnished by the consul of her country with a bill of health, which is her passport. A foul bill is given if she sails from a port where plague, cholera, or yellow fever prevail, and a clean bill if she sails from a port where no such diseases prevail. A false passport would be justly considered a very grave offense; and would be a sufficient cause for a demand for immediate explanations on the part of a government represented by such an agent or consul.

A few years ago, the cattle plague simultaneously invaded France and England. The French government immediately stamped the disease out by the destruction of about 100 head; while the English vacillated and procrastinated until over 300,000 had perished of the disease.

In 1865 our National Congress passed a law "to prevent the spread of contagious diseases among the cattle of the United States." In 1843, and again in 1850, pleuro-pneumonia was imported into Brooklyn, N.Y., and in 1847 into New Jersey, by English cattle; and in 1859 into Massachusetts by Dutch cattle. The New Jersey outbreak was immediately extinguished by the destruction of all the cattle on the farm where it first appeared; and a commission in Massachusetts, after six years of effort and the destruction of 1,146 head, besides those that died of disease, finally got rid of it in that State. But in New York State they vacillated and delayed, until by gradual spread the disease now prevails in Kings and Queens Counties, in New Jersey, Eastern Pennsylvania, Delaware, Maryland, District of Columbia, and some parts of Virginia. About the cities of Brooklyn and New York they call it the "swill-milk disease;" but it is the same disease that nearly destroyed the herds of Australia from the importation of *one* English cow; and the same that has kept some of the countries of Europe comparatively poor for more than half a century. No importation of Jerseys or other breeds into Ohio should be allowed from any of the infected regions where pleuro-pneumonia does or has existed; and the general government should follow the advice of committee after committee of its own appointment, and inexorably destroy all cattle in the infected districts that are known to be suffering from the disease, and then keep a standing force of veterinary police throughout the infected districts, to crush and wipe out all new foci that spring up. Were the tide of trade westward instead of eastward, the destruction of cattle in the middle and western portion of the country would prove a national disaster, from which we could not recover within the present century.

In the year 1878 the Russian plague appeared at Astrakhan during the time of military operations in that country. It is said that a Cossack soldier, returning from the wars, carried the specific poison in a shawl which he brought to his lady-love. The people of Astrakhan were seized with a panic, as well they

might have been, for 90 per cent. of all victims perished, and as they fled they carried the germs of the disease with them. Its general, if not universal, prevalence was probably arrested by a military cordon which was stretched in advance of the disease, beyond or through which line no person was permitted to pass.

In 1882 an epidemic of yellow fever broke out in Bagdad, Tampico, and Matamoras, in Mexico, and soon spread to Brownsville, Texas. In a few days, out of a population of 5,000 in that city, over 600 fell victims to the pestilence. The Governor of the State of Texas appealed to the Government of the United States for aid, and as the President had, under the law, already placed $100,000 in the Treasury Department to be used to prevent the spreading of epidemic diseases, Dr. John B. Hamilton, Supervising Surgeon-General of the United States Marine Hospital Service—an active, bright, young officer from Illinois, who has gained his enviable and honorable promotion to his present position by competitive examination, and with whom I have the honor of a slight personal acquaintance—immediately proceeded to establish a military cordon from Corpus Christi, on the Gulf, to Laredo, on the Rio Grande, along the line of the Mexican Central Railway. He afterwards contracted this line to nearer the line of the district infected. But in Mexico the epidemic spread from village to village, until its devastation reached up the Rio Grande for over 500 miles, and for this distance it found a sentinel in Dr. Hamilton's cordon at every available crossing; but from the Texas side of the Rio Grande the epidemic was held firmly and effectually at a distance, and was confined to the first infected district of Brownsville and its vicinity.

Eighty-six years ago, Edward Jenner, of England, taught the world how to throttle small-pox, and, in effect, to extinguish the loathsome disease from the face of the earth. Experience to this day justifies the most that was hoped for or claimed for the practice of vaccination; but in one single city of Ohio last year—Cincinnati—there occurred over 4,000 cases of this disease, with over 1,600 deaths.

A man, in his ignorance, or wilfulness, or blind prejudice, may claim he has a right to get the small-pox if he wants to; but no one can reasonably concede that he has a right to contract any avoidable disease that he knows to be loathsome and dangerous to life, and thereby jeopardize a city full of people who are afraid of and dread it. And yet in the great State of Ohio—a State for which we arrogate the claim of being the keystone to the social, political and intellectual arch of the national superstructure—in the year of grace 1872 or 1873, I had the honor of introducing a bill in the Senate, which became a law, giving boards of education the power to enforce vaccination among the pupils attending public schools, and that is all the law that now is, or has ever been, upon our statute books relating to vaccination!

Epidemic cholera is as much a native of India, as yellow fever at this day is of the West India islands. In the Bombay presidency, in India, are ninety-four shrines, to which pilgrimages are annually made as a religious rite. The religion of the Hindostanee teaches him that the waters of the Ganges have the miraculous power to cleanse him from sin. Some every one year, more every two years, more every third year, and still more every twelfth year, these misguided people make long pilgrimages to these shrines, to bathe in the waters of the Ganges. The twelfth yearly pilgrimage is called the Juggernaut pilgrimage; and at Hurdwar, below the mountain range, and near the headwaters of the river, 3,000,000 of these weary, jaded, filthy, ragged, perspiring, fanatical Juggernaut pilgrims may be congregated at one time, while the waters of the river are used for ablution, drink, and the receptacle of all the waste from 3,000,000 filthy human beings day after day, at one and the same time!

Ever since the year 1756, it has been observed by the whole civilized world that a twelvth year epidemic of Asiatic cholera has taken its rise among these congregated idolators. Some of these epidemics have been carried around the world, and our own country has several times suffered, each separate epidemic being clearly traceable to these Juggernaut festivals, and their line of march as clearly defined as the march of an army with banners. The physician and sanitarian can point out the specific remedy against its spread as an universal epidemic, but the power to enforce our plan rests with the doctors of international law—the plan of prohibiting, by military force if necessary, these Juggernaut festivals.

The different States should all have laws and regulations relating to the police power against epidemic diseases, and these laws should be so framed as to not come in conflict with each other, nor with those of municipal corporations, or those of the general government; and whatever be the form, the Governor of each State, to give dignity and prestige to the Board whose duty it shall be to enforce the regulations, and by virtue of his office as commander-in-chief of the commonwealth, should be its president.

But, with Oriental cholera ravaging China and Japan for the past three or four years; with the legions dead of it in Egypt within the closing year; with bales of rags laying on English docks, or in English warehouses, shipped direct from Egypt, and designed for the American market; and with the inter-communication between England and Egypt incident to a state of war, I ask any sane man, capable in any degree of self-protection, if it seemeth unto him any part of wisdom on the part of any State government to decline or procrastinate the officering of the unorganized battalions, and delaying all efforts at systematic organization, with the probable risk of the dark scourge in a night attack under the banner of the black flag?

A BABY WITHOUT ARMS OR LEGS.—A tetralogical case is interesting the profession of Madrid. It is one of a little girl, five months old, which was born without arms or legs. The thoracic and abdominal cavities are perfectly formed. Its first teeth have just appeared. It is healthy at present.—*Medical News.*

THE INFLUENCE OF THE PUBLIC SCHOOLS ON BRAIN-BUILDING.

BY W. J. CONKLIN, M.D., DAYTON, OHIO, PROFESSOR OF DISEASES OF CHILDREN IN STARLING MEDICAL COLLEGE.

[Read before the Ohio State Sanitary Association, February 14, 1884.]

The grandest work of the best civilization is the building of efficient brains. The school forms one of the most important factors in brain-building, and the manner in which its influence is exerted has very properly excited, during the past decade, general discussion in educational and sanitary circles.

We do not ignore the deleterious influences which surround the child in the street and home, influences which are incomparably more powerful in sapping its physical vigor than any connected with its school life. But our text to-day limits us to one phase of the question, the *effect of school work upon the health of the pupils*. We engage in this inquiry in no spirit of hostility to the schools. We know they are training up men and women who are fully competent to discharge all of the duties of State or society which may devolve upon them in the manifold relations of life.

Certainly, "no more earnest, self-sacrificing or intelligent workers gather around any labor, than those who wait on the ministry of teaching."

However, the warmest friend of the public schools will not claim that they are perfect; and it certainly behooves every citizen not only to support them, but to labor that they shall more fully accomplish the grand work for which they were instituted. In the discussion of this subject much exaggeration has been indulged by both parties. It is absurd to fasten all of the ills which befall children of school age upon the schools, and equally absurd to ignore the very general conviction of parents, physicians and sanitarians, that injury does accrue to a certain number from school work. Conditions in some degree inimical to health are inseparable from school life, as confinement, enforced quiet, vitiated air, prolonged mental effort, etc., etc.

To reduce the effect of these conditions to a minimum, and secure the best mental development, is the problem before us.

Whatever view of mind may be taken, it is sufficient for our purpose this afternoon to know that a normal brain is the essential prereqnisite of a normal mind.

Healthy cerebration requires healthy brains.

A cerebral tumor, a spot of inflammation or softening, an irregular or impure blood supply, plays sad but fantastic freaks with the sublimest minds. Again, the body is a physiological unit. Brain and muscle and bone all acknowledge the same general laws of growth, development, and functional activity. And so marked is the interdependence of the complex factors of the unit, that the integrity of any function, mental or physical, depends not only on the integrity of the specific organ, but also largely upon the integrity of all other organs and functions of the economy. If these statements are true, and to deny them is to take issue both with the teachings of physiology and the revelations of pathology, then any system of instruction which ignores them in its methods or requirements falls short of what it should be.

Judged by this standard, we proceed to point out some of the defects of our public school system—defects which impair its usefulness, imperil the health of the pupils, and which will ultimately defeat the effort to build up a perfect manhood and womanhood.

The school law of our State violates one of the plainest teachings of physiology, in fixing the age at which children shall be admitted into the schools at 6 years, and an unhealthy public sentiment demands the utmost that the law permits.

The physiological history of the child teaches unmistakably this truth; that its organism has relatively much more work to perform than that of the adult. Its nutritive organs, in addition to preserving the physical integrity of the economy and supplying force for dynamical purposes, are subject to heavy drafts for developmental needs. In infancy and childhood the brain is proportionately larger than in adult life, and so rapid is its growth, that it nearly doubles its weight during the first two years of life. Up to the fifth year, Dr. Peacock found the average weight of the brain to be one-seventh or one-eighth that of the entire body, instead of one-fortieth, as in the adult.

The brain increases rapidly in size up to the seventh year, and although it grows at a much diminished rate until between the ages of 30 and 40, at 8 years it has nearly reached its full size. The deduction, then, is plain that regular school life should not begin before the eighth year. Up to that age, let the romping, frolicsome and buoyant child nature be untrammeled by set tasks and hard discipline. Much, and enough, will be acquired without the primer. There are "sermons in stones and books in running brooks," which the child will hourly drink in, and which will place it on vantage ground for its later school work. In view, however, of the opposition of parents and of some practical difficulties in introducing the reform, it would perhaps be better to compromise upon seven as the legal school age.

By a parity of reasoning, we are forced to another conclusion: that the child having entered school, its immature physical and mental strength unfits it for long confinement and for severe daily tasks during the earlier years of its attendance. That the requirements of the public schools very frequently overstep the safety line is beyond question. After leaving the primary grades, the hot haste to secure results necessitates too many studies, excessive daily tasks, too much cram and grind, and very surely ends in overwork. This is largely the legitimate outgrowth of the times in which we live, the spirit of which the schools have imbibed. We are a fast people; live fast, work fast, demand that our children shall be educated fast, and, as a dyspeptic friend at my elbow suggests, often send them to the devil fast.

We have already referred to the very great activity of the infant organism. Now, it is a well-known pathological law, that wherever there is excessive nutritive, functional or developmental activity, there

also exists a marked predisposition to morbid changes. In harmony with this law, the nervous system of childhood presents a peculiar susceptibility to external influences. Children are very prone to "nerve storms." The convulsion which so commonly replaces the initial chill of an illness; the muscular twitchings; the wide excursions of the temperature due to a trivial indigestion; the babbling of schoolmates and lessons in fever; the impressible emotional nature; all bespeak the marked instability of the child's nervous organization. As adult life is neared, the nervous system loses its preponderance of size and activity; in part by the maturing of the nervous system itself; largely by the growth and development of the bodily organism. Notwithstanding the rapid growth of the early years, in nature's order, the nervous system is the last to reach maturity.

The lesson is obvious that during this whole period of excessive activity and immaturity, care must be taken lest its nutrition be interfered with and permanent injury result. The nervous system must be steadied and ballasted by robust bodies.

We do not mean to put brain in splints. Physiological use is one of the conditions of normal growth, whether of bone, muscle or brain. A proper amount of brain work is not only necessary to its own development, but conduces powerfully to general bodily health. The physiological condition is, however, only fulfilled when the work is fitted to the strength of the organ, and it is for this alone that we contend.

Dr. Clarke in "Sex in Education" writes: "If the schoolmaster overworks the brain of his pupils he diverts force to the brain that is needed elsewhere. He spends * * * in the brain-work of the school room force that should have been spent in the manufacture of blood, muscle and nerve; that is growth. The results are monstrous brains and puny bodies, abnormally active cerebration and abnormally weak digestion, flowing thoughts and constipated bowels, lofty aspirations and neuralgic sensations.

'A youth of study, an old age of nerves.'"

Physiology only answers the question before us in a general way. But it indicates plainly what experience confirms, that instruction should not be pushed before the age of 10 or 12, and with girls, perhaps not before 14 years. That this deduction is constantly disregarded is a matter of common observation.

We have no time to give specifications, and will only allude to two facts which have recently been impressed upon our attention.

The two lower grades, with an average age of 6½ and 7½ years, pass 5 hours each, and the higher grades 6 hours daily in the school room. I need only appeal to the experience of those here how much 6 hours of mental labor falls short of a full day's work for an adult.

Without any mental effort whatever, 5 hours' confinement for pupils under 9 years of age, with the enforced quiet and constrained positions, which the ordinary school sitting and school discipline necessarily enforce, in a room probably overcrowded and badly ventilated, is too much for growing bodies.

Arithmetic is proverbially the hardest study for young minds to master in the curriculum; it furnishes the largest percentage of failures at the annual examinations, and is the study about which children most often talk in their sleep. And yet in a neighboring city, noted for the excellence of its schools, arithmetic is completed in the 7th grade, the members of which average less than 13 years of age.

Many educators, admitting fully the bad results of overwork, maintain that there are no statistics to prove that injury results from the present system. We admit the force of the objection, but there are some things which statistics can not prove, and which they are not needed to prove.

Certain factors in school life manifest their deleterious influences in results that can be easily measured. Thus 90 per cent. of the crooked spines, not due to special disease, can be traced to improper school furniture. And statistics abundantly prove the lamentable increase of myopia among school children, due to the too prolonged use of the eyes on small type and to badly lighted study rooms.

But the injurious effects of over brain-work can not be so tabulated. It is not a question of so many studies=so many deaths; or so many hours in school =so much chorea; but much more a question of undermining the general robustness of the child; of stunting and dwarfing the physical and mental development; of building up a nervous system unable to bear the shocks and friction of later life. But the danger does not end here. Cause and effect are endlinks of a chain which not only spans the life of the individual, but the lives of the children's children.

And thus the vicious circle widens and widens, until the victims, unable to bear up in the struggle for existence, succumb to nature's law of the survival of the fittest, and the family is at last blotted out.

We are perfectly content to rest the question of overwork in the schools upon the general conviction of the medical profession, the members of which enjoy abundant opportunities for observation, and are especially fitted by education to form an intelligent and unprejudiced opinion.

The profession has spoken in no uncertain tones, and the almost unanimous opinion is that too heavy burdens are imposed upon school children, tasks disproportionate to the age and capacity of the pupils. Quotations to this effect could be multiplied from the proceedings of various local, state, and national societies, and from the published utterances of its most accomplished members.

My friend, Dr. Reeve, in a most excellent lecture before the teachers of Dayton, pertinently says: "If you ask me for my list of deaths from this cause (overwork in schools), I have none. If you inquire how many cases of insanity, epilepsy or chorea I have seen result from this cause, I have none. But if you ask me how much I have seen of disturbed sleep, disordered digestion, irritable and fretful tempers, and other evidences of the direct effect of causes injuriously affecting the health, I am obliged to say, in reply, a good deal—enough to need prompt and decided correction."

It will not do to reply that the work of the schools is no longer irksome.

It is very true that the modern teacher has well nigh discovered a "royal road to learning," and has woven around her calling a web of infatuation which holds the little ones spell-bound in its meshes, yet she has not set aside nature's law. School work is still brain work, and brain work is exhausting work. Go, enter any of the grades and see the pupils at work. Watch the class on the recitation bench. "See the anxious, working faces, over which exultation and mortification chase each other, like light and shadow, its quivering hands darted into the air at every question and after half the answers," and then say whether such concentrated attention, quick and accurate thinking, is not mental labor of a severe kind.

We are aware that *overwork* is largely a relative term. Minds vary greatly in their capacities and powers of endurance. The ideal school would adapt the work accurately to the individual capacity.

This is manifestly impracticable in the large, overcrowded public schools, but an approach to it can be made by carefully grading the requirements to the average age of the pupils, and by not permitting school work to monopolize time and energies which are needed for bodily development.

It is often urged that the schools are not hospitals; that they are founded upon "the greatest good to the greatest number," and if any child is weighted down by a vicious inheritance, acquired disease or a bad organization from any cause, it must be pushed aside in the race or struggle on into a manhood of ill health and scant usefulness. If the instances of physical injury were rare, this might pass for good philosophy, but when the testimony comes from every side that the evil is widespread and growing, and threatens the mental and physical welfare of the race, then it is certainly time to seriously consider whether the present system will *ultimately secure* the *greatest good* to the *greatest number*. That is a shortsighted policy, indeed, that refuses to look beyond the immediate horizon.

It is important in this connection to ascertain whether the number of school hours now required, and against which such vital objections exist, is necessary for the highest mental development. The length of time during which concentrated attention is practicable in early life is very limited. Experience would coincide with the deductions from physiology in placing the limit of profitable and safe study for children under ten years of age at three hours per day. It has been proven over and over again that a child under ten or twelve can receive as much mental nourishment in three hours of set tasks, as it can assimilate, and without assimilation, a mental indigestion, with its long train of sequelæ, surely results.

Perhaps the most striking proof of the truthfulness of this proposition is drawn from the "half-time" schools of England, a system provided by law for children employed in factories and workshops. These children receive daily instruction for one-half the number of hours spent in the public schools by those not at manual labor. It has now been in operation for more than 30 years, and reports of its workings, made by competent official inspectors, are found in Parliamentary documents. These prove beyond question that the half-time pupils learn quite as much as those who are in the same schools twice as many hours per day.

A few years ago, on account of the overcrowded condition of one of the schoolhouses in Dayton, it became necessary to reduce the attendance of the lower grades to one-half a day. To the surprise of every one, the examinations of the half-time pupils were as creditable in every particular as of those who had spent full time in the rooms. With these facts before us, it would certainly be the part of wisdom to limit the time passed in the primary departments to three hours a day. Other obvious advantages would result from this plan. By dividing the school into forenoon and afternoon pupils, the overcrowded condition of the primary grades would be relieved, and the teachers would have an opportunity of making an individual study of the wants of each child.

Under the present system, the girls fare worse than the boys. Their more impressible nervous systems and less sturdy physiques render them especially liable to suffer from confinement, lack of fresh air and exercise, and from over brain stimulation. Up to about the age of 13, sex has ordinarily no disturbing function; at that period, radical changes occur in the organism, upon the normal completion of which her adult health, and the ability to discharge her maternal relations largely depend. Even ordinary mental work at this revolutionary period may divert force which is needed for developmental purposes. At no other time in life is the nervous system so excitable and so much in need of protection from all worry and fret. The belief is generally entertained by those most competent to judge, that girls should be excused from set school work for a variable period, often an entire year, at this important crisis. Were this done, we would hear less of disordered menstruation, weak backs, hysteria, and the many nervous maladies which go to make up the proverbial "little health" of American women. The school life of the average girl ends at an age when, from a physiological standpoint, her serious educational work should begin. Wier Mitchell says: "At 17, healthy girls are nearly as well able to study, with proper precautions, as men; but before this time over-use, or even a very steady use of the brain, is dangerous to health, and to every probability of future womanly usefulness."

The co-education of the sexes opens up a vast field of discussion which we have no time to enter. The physical and mental differences between boys and girls are so distinctive that it is certainly questionable whether the best development of each can not be better attained in separate schools, at any rate after puberty, when these differences assume such predominant importance.

Another objectionable feature of the modern school is the very extensive and unnecessary use of artificial stimuli to study. Within certain limits personal emulation is useful, healthy and natural. Markings, prizes, honors, per cents. and examinations are now persistently used as spurs and whips to goad on to

greater effort. They exert but little effect upon the dull and sluggish, while the full force of their pernicious influence falls upon those who need to be curbed instead of urged. Examinations undoubtedly cause more fret and worry and nervousness than any other school exercise. Examination week is everywhere, according to the observation of physicians and parents, a week of disturbed sleep, capricious appetite, night study and general ailing. They usually follow a long season of close application when mind and body are wearied, and the intense excitement induced by them often proves the "straw which breaks the back of mental and physical endurance." We would not abolish examinations, but would decrease their number and limit their power. The daily record for the entire term, rather than the results of that one nervous hour, should be the test of scholarship and promotion.

We have thus briefly reviewed some of the imperfections in our public school system which are sure to result in bad brain building. The school cannot afford to cripple its usefulness by antagonizing the well known laws of physical development, nor can the State afford to have it so crippled.

We repeat our conviction that the schools are but one factor, and perhaps the least, in undermining the physical vigor of American children. The only way, however to correct the evil practices and bad hygienic surroundings of street and home is through the school house.

The shortest route to the fireside is through the school house.

When teachers become thoroughly aroused to the importance of the physical development of the young, and familiar with the fundamental truths of physiology and sanitary science, then, and then only, will education become in fact what the root signification implies—*a leading out*—a symmetrical development of all the faculties, mental, moral and physical.

Our plea is for better school accommodations, including heating, lighting, ventilating and furnishing school buildings; for a later school age, lighter tasks, shorter hours and more play during the growing period of life; a period in which children are not only most readily but most permanently affected by every influence to which they are subjected.

We place no premium upon idleness or stupidity. Good digestion and healthy brains are not antagonistic: a torpid liver and brilliant cerebration are not necessary associates, but, on the contrary, the "mens sana in corpore sano" is as true to-day as when uttered by the heathen poet.

Ohio has upon her statute books a law which points the way to a removal of many of the objectionable features of our common schools: a law, be it said, to her credit, not found in any other State in the Union. The amended section 2135 of the Revised Statutes requires Boards of Health to inspect semi-annually and oftener, if necessary, the sanitary condition of all schools and school houses within the limits of the corporation. So far as we know the law sleeps upon the statute books. It certainly comes within the province of an association such as we organize to-day, to breathe into it *new life*.

TOXIC EFFECT OF ALCOHOL IN EXSANGUINITY.

BY JOSEPH SAGER, M.D., NORTH WASHINGTON, OHIO.

[Read to the Northwestern Ohio Medical Association, December 11, 1883.]

On the third day of October, 1883, I was called to attend Mrs. B., the case proving to be placenta prævia. She was an American by birth, aged 42 years, and the mother of seven children. Upon arrival I found her almost totally exsanguinated and still bleeding. She wore the pallor of death, as much so as she did when she was dead. She could not speak above a whisper. The examination revealed a case of placenta prævia partialis; head presenting the mouth of the uterus very little dilated, with gushes of blood and no pain. The first I did I gave her a full dose of ergot, not for an oxytocic, but for a styptic; at the same time I gave her an injection of warm water followed with an injection of cold water. The opposite effect of cold water to warm water made an impression on the periphery, causing a reflex action, thereby closing up the uterine vessels. The effect was a happy one, the hæmorrhage became less and the pain came on.

The placenta occupied the right half of the lower segment, and being pushed through the os, I ruptured the membranes, allowed the escape of the liquor amnii, and forcibly dilated the mouth. The patient having been very much exsanguinated, I turned and delivered at once. The result of my labors was a male child, dead. By this time the patient being much exhausted, and from the loss of blood, she was thrown into convulsions.[1] I administered chloroform at once, kept it up at intervals for six hours, by which means I controlled them; at the same time I put hot bricks to her feet and applied warm blankets to her body. At the expiration of six hours she was comfortably warm.

The hæmorrhage had ceased as soon as the child was born.

I would say, by way of parenthesis, that this patient was of a neurotic diathesis, so that when the convulsions were controlled, she was taken violently with intercostal neuralgia. I gave her a full dose of morphia hypodermically, which effectually controlled it.

The next day, Thursday, October 4, she felt quite comfortable. Friday morning, October 5, she felt very comfortable, took some light nourishment; inquired of the Presbyterian church, and how the new minister was liked.

Saturday morning, October 6, I was called in haste to see Mrs. B., it was said she was dying. On arrival I found her in the following condition: She was crazed with neuralgic pains—facial, intercostal and sciatic neuralgia, with pain in her abdomen, some tympanitis, was very thirsty, called for water continually, very much prostrated, and difficult respiration.

On investigation, I learned that her drunken brother had consulted a friend of his—a doctor—who

[1] There being no kidney complications.

enjoined him to give his sister whiskey, whatever he did, if he wanted her life saved. Surreptitiously to myself he did it. He gave her whiskey Friday afternoon and Friday night, one pint, if not more, in tablespoonful doses. I stopped the whiskey, but it was too late. She died Sunday morning, October 7, in the greatest agony—a sacrifice to despotism and egotistic ignorance.

Whatever may be the effect of alcohol in health, the action on the nervous system, the effect it has on the circulation and nutrition, on the metamorphosis of tissues, and the arrest of the secretions, the toxic effect of alcohol is far greater in anæmia, and still more so in exsanguinity. When we take into consideration the poverty of the blood in exsanguinity, with but little reserve force, we can see at a glance that all the powers of nature must be supported by all conservative means which can be brought into play. The red corpuscles, which are so necessary to life must be cared for, and their genesis.

If we sacrifice a single red corpuscle, we hazard the life of our patient, as the force of the nervous system depends on the presence of oxygen in the red corpuscles.

It is an incontrovertible fact, that the toxic effect of alcohol in anæmia or exsanguinity is the destruction of the red corpuscles in the blood, either directly or indirectly.

It is conceded (and by good authority[1]) that alcohol favors the genesis of white corpuscles in health, which pabulum goes to form areolar tissue, muscle, etc., and every day's experience teaches us that the habitual moderate enjoyment of alcohol encourages a tendency to corpulency. Should this be the case in exsanguinity—the genesis of the white corpuscles favored, it would take the place of the red corpuscles, and prove calamitous to them.

The more probable theory is, that alcohol deoxidizes the red corpuscles. Hence their destruction.

Schulinus admits the destruction or decomposition of alcohol in the blood by way of deoxidizing the blood. He also says, by the introduction of half a drachm of alcohol into one of the lymphatic breasts of a living frog, the circulating fluid was changed from a bright red to a dark color.

Bonwetsch states that alcohol has an affinity for oxyhæmoglobin, destroying the oxygen in the red corpuscles; this he demonstrated by experimenting with ox blood.

I have myself injected alcohol into the cavity of the peritonæum of a live frog under the microscope. I could plainly notice in the circulating fluid in the web of the frog's foot, that at first the circulation was accelerated, but soon it became slower; the disks of the red corpuscles were flattened, while some were blasted or destroyed. The white corpuscles were unmolested, travelling slowly, adhering to the walls of the capillaries.

With these demonstrated declarations, let us look at the present case.

It is well known that in anæmia, we have to deal with the poverty of hæmoglobin in the red corpuscles, while in exsanguinity, we have to deal with the scantiness of the red corpuscles.

According to Flint and other physiologists, when the blood corpuscles are diminished in quantity by hæmorrhage, they are augmented *de novo* in the liquor sanguinis; this, then, is the reserve force.

Having taken care and fostered this reserve force by conservative means, our patient was in a fair way to recovery on Friday morning. The administration of whiskey not only bled our patient indirectly, but destroyed the red corpuscles of the blood and reserve force also.

The condition of the patient speaks for itself. The intense heat and thirst from the burning of oxygen, the condition of the nervous system, and hurried respiration, prove the destruction of the red corpuscles.

What else did it?

There was no other cause—I know whereof I speak.

Experience has proven it, and will prove it again, that alcohol, given to anæmic children, will produce asphyxia. Is it not reasonable, when the respiratory element itself is destroyed?

Alcoholic toxæmia will produce a constitutional tendency to inflammation. This we notice in debauchees. While in this debauched condition from alcohol, the least lesion tends to inflammation. The worst case of cellulitis I have had, was a case of this kind.

The white corpuscles are increased in the blood. At the same time the fibrin is increased largely also. These constitutional conditions will effect local changes in fresh lesions. The uterus in the puerperal state is in condition to become inflamed, if it has the least encouragement. It is a fresh lesion, although physiologically so. In addition there is hyperfibrination and degenerative changes going on.

Now let the blood become deoxidized, either by bad ventilation or a want of cleanliness, sepsis, or from any other source, there will be an inflammatory condition follow.

In my early practice I remember a physician who invariably "dosed" his puerperal patients with whisky. This physician had more puerperal fevers to contend with than any other physician in his vicinity. He finally sacrificed his own wife to this sinful practice.

I know of a bleeder, who whenever she would take wine, the hæmorrhage was increased. She finally refused to take it at all. I gave her credit for her good sense.

From the foregoing considerations, we must conclude that in alcoholic toxæmia the red corpuscles in the blood are decreased by destruction, and the white corpuscles are relatively increased, either by genesis or as the red corpuscles are relatively decreased.

In conclusion I would say, the above considerations being true, we, as a profession, should speak against this sinful practice in thunder tones, that it may be felt through the country from center to circumference.

Dr. N. S. Davis, of Chicago, in his report on the

[1] Leibig.

practice of medicine to the Medical Society of the State of Illinois, discourages the use of alcohol as a remedy in the treatment of disease, in typhoid fever, and especially so where there is a cardiac weakness.

This paper was hastily written, not having time to gather and collect statistics on the subject. I submit it to the society for what it is worth, with the earnest desire to see the theory and practice of the use of alcohol as a remedy in exsanguinated subjects perish and be for ever wiped out.

ARTIFICIAL CULTIVATION OF VACCINE VIRUS.—Dr. C. Quist, a physician of Helsingfors, Russia, announces in the *St. Petersburger Medicinische Wochenschrift*, that he has discovered a method by which vaccine virus can be cultivated in the laboratory. His claim, if true, would render vaccine farms superfluous, since all our virus should be grown in a watch-glass. It will, therefore, be examined with much interest.

Dr. Quist, by cultivating the micrococci ot the vaccine lymph found that they developed into bacilli, which in turn produced micrococci again. After many experiments he found that the two things necessary for growth were oxygen and a proper culture fluid. The vaccine bacterium is, he says, "an exquisite ærobium." The best culture-fluid he found to be egg or serum albumen, to which is added glycerine (to prevent desication) and a little carbonate of lime. The following is one of the several formulæ which were used:

℞ Blood serum, 1 part.
Glycerine, 1 part.
Aquæ distill, 1 part.
Calcii carbonat, 1-900th part.

This fluid is sterilized by keeping it at a temperature of 60° C. It is then spread upon a glass plate, a drop of vaccine lymph is mixed with it, and the whole is covered with a glass bell. The preparation is thus kept for a number of days. In six to ten days the surface is covered with the vaccine organisms. A little of this can be removed and inoculated with the result, according to Dr. Quist, of producing a perfect vaccine pustule. Our experimenter has found also that one inoculation of this cultivated virus produces immunity against a second. He does not, however, yet give evidence to show that these inoculations prevent small-pox.

It appears from reading the account of Quist's experiments that they were carefully conducted. The obvious criticism, however, is that they may only show that vaccine lymph can be largely diluted and yet retain its potency.—*New York Medical Record.*

PROF. BILLROTH'S ANTISEPTIC PRECAUTIONS.—The Vienna correspondent of the *Gazetta degli Ospitali* was recently invited to a laparatomy in Prof. Billroth's clinique in the following note: "Dr. —— is hereby invited to the operation of ——, which is to take place ——. It is understood that Dr. —— undertakes not to visit the same day, before the operation, sick rooms, dissection rooms, or other places in the Pathological Institute, and not to wear clothes which he may be in the habit of wearing in visiting these places."—*Lancet.*

MEDICAL PROGRESS.

ANATOMY AND PHYSIOLOGY.

COMPLETE ABSENCE OF JEJUNUM, ILEUM, AND THE GREATER PART OF THE COLON.—Mr. William Thomas reports a case in the *Lancet*, where in a premature birth at seven months of a female child, no anus was visible; no urethral orifice was visible, but a probe passed in the direction of the urethra for about two inches could be readily felt through the abdominal wall above the pubes. A second could be passed along the posterior wall of the vagina in the direction of the rectum for more than three inches. The child took the breast, but could not retain food for many minutes. It died in four days' time from exhaustion. The autopsy showed: no union between the pubic bones, an interval existing between them large enough to admit the finger. Stomach of normal size, connected with the duodenum by a constricted pylorus half an inch in length and rather less in diameter. The duodenum was an inch and a half in diameter in the distended state, and curved round the pancreas, to terminate on the left side of the spine by a blind extremity. There was no trace of any other part of the small intestine, nor of the cæcum, ascending or transverse colon. The intestine was recommenced by a blind portion of descending colon lying on the lower end of the left kidney, and continued by a sigmoid flexure and rectum, to terminate in the vagina.

A CASE OF GASTRIC FISTULA, WITH PHYSIOLOGICAL OBSERVATIONS.—Dr. de Cirenville (*Revue Médicale de Suisse Romande*), gives the case of a vine-dresser, 28 years of age, who suffered for some months from symptoms of gastric derangement which prevented his taking any nourishment. An examination showed an obstruction at the cardiac orifice of the stomach, with a distension of the œsophagus. It was found necessary to open the stomach on the left side, which was performed with success, a fistula established and relief afforded. The patient was fed through the fistula by means of a tube, and gained in weight in 11 days from 105 to 132 pounds. In the early treatmeut of the fistula a simple canula was used, which allowed some of the gastric juice to transude about and upon the open wound to the surface of the skin. This resulted, first, in an eczematous redness of the skin, followed by an ulceration due to a genuine digestion of the skin, but which, after the substitution of the canula used in physiological experiments for the simple canula, was readily healed. It was found impossible to overcome the resistance of the cardiac orifice, either by the sound introduced through the œsophagus or from below upwards through the stomach.

M. Herzen, Professor of Physiology, at Lausanne, adds to this record of the case, the results of some of his experiments in stomach digestion, which he intends to make more complete and to give more in detail. He notes the fact in this case that the stomach contains regularly, in the intervals of digestion, a considerable quantity of fluid, between 200 and 300 centimeters; that it contains no traces of the previ-

ous meal. Its appearance, odor and reactions showed that bile was present, but nevertheless it was sufficiently acid to redden litmus paper and to give the violet color with an aqueous solutior of tropéoline OO; it transformed starch into sugar; this too with an impermeable obstruction to instruments at the cardiac orifice which excluded the probability of saliva passing into the stomach, and rendered it possible that the pancreatic juice might be present. To test this point he gave as a drink 50 c. c. of the syrup of myrtle? strongly colored and containing the pellicles of the berry. In a quarter of an hour nothing had entered the stomach, in a half an hour the contents of the stomach were rose-colored, and in three-quarters of an hour there was a decided red color, with two or three pellicles. The test for trypsine was negative, but pepsine and zymogene were found in a very small quantity.

Calling this the first contents of the stomach, he passes to consider what he calls the second contents of the stomach. After introducing a canula and emptying the stomach completely, by degrees a fluid is formed which is entirely different from the first; it is colorless, limpid, thick like the white of egg, and in much smaller quantity than the first. It is acid in reaction with litmus paper, but not always with tropéoline, due, possibly to the varying amount present of albuminoid substances which combine with the acid. Its digestive property is appreciable only when diluted with an acid solution, but does not even then equal the active peptic gastric juice.

Digestion in this case continued for 7 or 8 hours, and after the stomach had completed its work, there seemed to be a complete relaxation which resulted in the passage of the contents of the duodenum into the stomach, the desire for more food returning some time before the stomach had emptied itself. His experiments in peptogenesis are so far limited, but he records one fact noticed, that in introducing the albumen mixed with distilled water simply, an indigestion followed which showed, with other experiments, that it was necessary to accompany it with some peptogenic liquid, as a small cup of bouillon, to insure its proper digestion. According to this, then, we should suffer from indigestion more frequently after our morning meal, were it confined to eggs, for example, and were it not, as it usually is, very peptogenic in character.

Researches into the Modifications of Temperature by Ointments Extensively Applied in Febrile Diseases of Children.—Dr. P. Colvat discusses this interesting subject at some length in the *Lyon Medical*. He dates the contradiction of the physiological view of this question, that impermeable coverings to the skin are dangerous, from the demonstrations of Fourcault in 1838, to the effect that an impermeable varnish and fatty ointments produced a refrigerant and beneficial effect in phlegmasiæ. Schlemann is generally given the credit of having introduced this method, which he employed only in scarlatina, by anointing the whole of the cutaneous surface, thereby modifying the fever, diminishing the frequency of the pulse, relieving the sensation of heat and tension of the skin, rendering less frequent the complications which accompany desquamation, and diminishing the chances for contagion. A number of writers have followed these in their favorable consideration of the subject, but Senator (1877) is the only one who has made any important researches into the lowering of the temperature in these cases. He found in the normal adult no change in the temperature after the application to the skin of a variety of impermeable substances and fatty matters; in the feverish adult there was a lowering of the temperature, but it was restricted in degree, and supposed that in children the lowering of the temperature was due to their approaching more nearly to the state of the lower animals in the great extent of their external surface. (How this reasoning applies exactly is not made very clear.)

Dr. Colvat has used this means with children in cases of scarlatina, variola, broncho-pneumonia, etc., using suet, cerate, and vaseline, preferring the latter from its never becoming rancid. He has nearly always observed after its application the symptoms consecutively of relief, calm, and sleep, and in most cases a notable and persistent lowering of the temperature, the thermometer in the rectum recording generally a lowering of 0.5° C., and exceptionally 2° C. The fall of temperature commences immediately after inunction, in five minutes to the amount of several tenths of a degree; at the end of an hour, as a rule, the lowest range is reached, to return to its former height in from two and a half to three hours. If then the ointment is re-applied, the same phenomena recur. Most of his cases were children of from one to two years of age; one was thirteen days old, another three months, and in these two was the lowering of temperature most marked.

It would seem as if to-day it was abundantly proved that no injurious effects followed this treatment. Schlemann continues the anointing of scarlatina cases for four weeks. Not only is there no albuminuria or visceral congestion produced, but they seem with the serous inflammations to have become less frequent as sequelæ. As to the now classic case of the child that was gilded to assist in the ceremonies which made Leon X. a Pope, Senator explains its death as from poisoning from some toxic material used in the gilding.

When it comes to giving the physiological reasons for the facts stated, Dr. Colvat admits with Claude Bernard that he is at fault, and can give no satisfactory explanation. He discusses a number of theories, but in a doubtful manner.

OBSTETRICS AND GYNÆCOLOGY.

On the Application of Forceps to the Breech.—Dr. Ettore Truzzi has published in the *Gazetta Medica Italiana Lombardia*, an article on the advantages and the methods of applying the forceps to the podalic extremity of the fœtus, a translation of which is given in full in the *Annales de Gynécologie*.

Dr. Truzzi recognizes the presence of certain conditions where the podalic extremity becomes immov-

able, and where it is necessary to bring down the feet or to use the finger or crochet in the groin in order to deliver the fœtus. He cites Livret as recommending the use of the forceps under the circumstances, and refers to Belluzzi as having given in full the pro and contra views on this subject. In his own practice he gives two cases where easy extraction of the fœtus was accomplished without any slipping of the forceps or injury to the child. Professor Porro assured him in their consultation upon one of the cases, that the dangers attendant upon this operation were greatly exaggerated, giving a case where the forceps were applied to the breech, in 1871, by Dr. Nonzini at the Maternity Hospital at Milan, with great success.

The recent memoirs of Belluzzi and of Ollivier tend to popularize the application of the forceps to the breech. But these two authors do not agree as to the best modes of making the application of the forceps. Belluzzi considers that the forceps, to be useful, should have a cephalic and pelvic curvature much less marked than in the ordinary forceps; the fenestrated extremities should also have a much larger opening. Ollivier considers that the forceps should not be applied to the pelvis, but to the thighs, and would be particularly applicable in the posterior sacro-iliac positions, the lower limbs being folded over the sternal plane, and corresponding to the anterior wall of the maternal pelvis, the forceps could then be applied to the thighs without exerting any pressure on the abdomen or pelvis of the fœtus.

With these points prominent in his mind, Dr. Truzzi experimented with 14 subjects where the child had died during labor or shortly after birth. He gave them first a prolonged warm bath to remove all cadaveric rigidity from the soft parts, then placed them in the pelvis in the position for a breech presentation, supporting the thighs against the sternal plane by means of cords. He was assisted by Prof. Porro, and extraction was attempted with the fingers, the crochet and the forceps. After extraction, a careful dissection was made in each case to determine the extent of the lesions. From these experiments, and from his two clinical cases, he arrives at the following conclusions:

1st. In the case of wedging of the breech in the upper or middle part of the pelvic excavation, if a rapid extraction is necessary, instead of attempting traction on the fold of the groin with the finger or the crochet, it is preferable to apply the forceps. Undoubtedly, traction in the groin admits of a better adjustment, and exercises less force than with the forceps, but these advantages are amply compensated for by the accidents which so frequently result, as fracture of the femur, and laceration of the soft parts of Scarpa's triangle.

2d. The proposition of Ollivier to apply the forceps on the thighs and not on the pelvis of the fœtus, is seductive in theory, but not in practice. In the sacro-iliac posterior position, the hold being upon the thighs, the posterior borders of the blades always compress the abdominal walls of the fœtus, and as the extremity of the forceps should, according to Ollivier, extend almost to the knees, the compression would be dangerous for the integrity of the parenchyma of the liver. They are liable to slip gradually, and after traction, lose their hold and produce an antero-posterior chafing.

3d. Much easier, surer, and less dangerous is the method of applying the forceps to the sides of the pelvis of the fœtus. The iliac bones are, at that period, quite elastic—they are protected by soft parts, which form true cushions, so as to sustain considerable pressure before appreciable lesions can be produced upon the pelvis of the fœtus. In all of the careful dissections made after these experiments, there was no fracture of the illiac bones, or lesions of the sacro-iliac or pubic articulations.

4th. To obtain a firm grasp, the blades of the forceps must reach the level of the crest of the illeum. They should be so brought together as to make these crests the points of resistance during traction, and to give the hips of the fœtus a convexity of form, thus filling in the space and preventing injury to the abdominal viscera. This mode of application of the forceps is absolutely without danger, according to Dr. Truzzi, who has never seen any contusion or laceration of the parenchyma of the liver or other viscera as a result.

5th. In his experience, the Porro forceps applied to the sides of the pelvis of the fœtus, give an excellent hold, particularly in anterior presentations. In posterior presentations, if the forceps slip, it is better to rotate the sacrum anteriorly, and then reapply them. It is well in the intervals of traction to keep up a certain degree of compression of the handles, as the iliac bones tend, by their elasticity, to return to their previous shape, and thus push aside the blades, causing them to lose their hold.

NEW INVENTION.

A SUBSTITUTE FOR STRAPPING THE TESTICLE AND THE TREATMENT OF HYDROCELE.—Dr. J. C. Warren exhibited to the Suffolk District Medical Society a chamois-leather bag which he had devised for the purpose of exerting pressure on a small collection of fluid left in the tunica vaginalis remaining after an operation for radical cure, and a woodcut of which is given in the *Boston Medical and Surgical Journal.* The bag can easily be applied by isolating that portion of the scrotum containing the testicle to be compressed and forming a pedicle, which is preserved by tightening the chamois-leather string. The bag is then laced from above downwards, and, if it has been made to fit snugly, exercises a gentle and equable pressure. If it is necessary to increase the pressure, a few turns of a common narrow roller bandage around the equator of the globular mass are all that is necessary. This bag is free from the well-known discomforts of plaster, is easily made and applied, and can be removed and reapplied by the patient himself as often as is desirable, thus avoiding excoriation at constricting points. In the single case in which it was used, the effusion promptly disappeared, and has not since returned at an interval of nine months.

MATERIA MEDICA AND THERAPEUTICS.

Fraudulent Tartar Emetic.—An article in the *Progres Mèdicale* is quite severe on the chemical products introduced from Germany into the French market, as being impure and consequently sold at lower rates. Of tartar emetic it says: The Syndical Chamber for chemical products at Paris, found the German preparations to contain 41 to 46 parts per 100 of oxalic acid. The municipal laboratory arrived by analysis at the same result. After these facts had been made public, the *Chemiker Zeitung* of Goethen declared that from different places, particularly from Saxe and from Wurtemburg, a so-called emetic salt was introduced into commerce containing oxalate of potassa and antimony without a trace of tartaric acid.

It is sufficient to consider the preparations in which this salt takes part to recognize the danger not only from replacing tartar emetic by an unknown salt, but also from its rapid poisonous effect. Tardieu cites a case where death followed the ingestion of 30 grains. Besides being used as an emetic, tartar emetic is used as a purgative, as an alterative, and as a counter-stimulant, in doses of from 8 to 15 grains during the 24 hours, (?) and persisted in for days at a time; which is much more than would be required to poison a patient with oxalic acid.

The Preparation and Application of Kephir (the New Drink from Caucasus).—Dr. W. Maximon writes from St. Petersburg to *La Semaine Médicale* concerning this new drink, which has become quite fashionable, and replaced koumiss to a great extent during the past two years in St. Petersburg. It has been carefully studied by more than a half dozen of the scientific men of Russia, and only differs from the koumiss of cow's milk in being produced, not by yeast, but by a specific ferment, which comes from Caucasus; it was for a long time a great secret among the inhabitants of that region, who have many legends to explain its origin. They prepare a drink called arian, by pouring the fresh milk of the goat into an oaken vessel with a narrow neck, placing in it a piece of the stomach of a sheep or calf; when the milk clots they shake the vessel from time to time, and then use it for drink. When the milk is used up they renew it with fresh milk which mixes and clots with the rest; this goes on indefinitely. At the bottom and walls of the vessels a peculiar sediment forms in the shape of balls or grains, which is the specific ferment in question.

If this be placed in fresh milk it produces a new fermentation, and gives a soft and refreshing drink, with an agreeable taste, called kephir, from the word *keif*, delicious. This liquid has the thickness of cream and is frothy, it is exceedingly nutritious and light, even for the weak stomach of sick persons, more so than koumiss. The grains of kephir when examined microscopically, present spores of the saccharomycetes, oidiumlactis and bacteria.

It requires a certain amount of skill and a good deal of patience in its preparation. A half a glassful of these dried grains, which are found on sale in many of the Russian towns, is put into warm water for five or six hours until they swell up. Then they are put into a glass of fresh milk, which is changed every three hours for two or three times. When these thoroughly softened grains change from a yellow to a white color, they are ready for use in making kephir, and are put into fresh unskimmed cow's milk in the proportion of a soupspoonful of the grains to two glasses of the milk: the carafe is covered with a bit of muslin and exposed without cooking to a temperature of 64° to 69° Fah., shaking it constantly. In seven or eight hours after it has commenced to ferment it is transferred to champagne bottles, being strained through the muslin and kept at the same temperature, the bottles being shaken every two or three hours. At the end of twenty-four hours it is prepared for use, but does not contain much carbonic acid or alcohol, being called weak kephir. At the end of two days it is of medium strength, and of the consistency of cream. At the end of three days it becomes more liquid, and is the strongest. To preserve it in its various stages of strength it is put on ice in the cellar, the cold arresting the fermentation, but it must still be shaken at least once every day. This ferment will serve after removal to prepare a fresh supply of kephir, or if not needed for immediate use the grains are carefully washed, dried quickly in the sun and preserved in hermetically sealed glass vessels.

The properties of good kephir are: its consistency of cream, its milk-like color, no residue, frothy like beer and a sharp sweet taste, which pricks the tongue like carbonic acid. According to a number of scientific observations, kephir is the best of all known nutrient drinks, being three times more so than koumiss; it is very easily digested and is strengthening, it is also expectorant and diuretic. Is used in general debility and deficiency of nutrition with convalescents from serious diseases, such as typhoid fever, also with children at the breast to replace breast milk, when it is made from skim milk, is boiled and mixed with water, four or five spoonsful to the bottle.

The chemical analysis gives for the unboiled milk a percentage of caseine, 85.7; albumen, 8.3; hemialbumen, 6.0. Boiled for ten minutes, caseine, 76.6; albumen, 0.8; hemialbumen, 22.6.

As boiling prepares the albuminous substances of milk for stomach digestion it is perhaps best in the boiled state. For anæmics, 0.06 to 0.12 centigrammes of lactate of iron to the bottle is useful.

As it is merely an aid to nutrition, the dose is not fixed. One glass the first day, two the second, three the third, and so on until three or four bottles are taken in one day. It is drank by mouthfuls and warm. Fresh kephir, that of 24 hours ferment, is a little laxtive; strong kephir is a little constipating.

A new medical college in Cincinnati has been organized under the title of the Medical University of Ohio.—*Louisville Medical News.*

THE

Journal of American Medical Association.

PUBLISHED WEEKLY.

THE EDITOR of this JOURNAL would be glad to receive any items of general interest in regard to local events, or matters that it is desirable to call to the attention of the profession. Letters written for publication or containing items of information, should be accompanied by the writer's full name and address, although not necessarily to be published. All communications in regard to editorial work should be addressed to the Editor.

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SATURDAY, MARCH 8, 1884.

ILLITERATE DOCTORS AND MEDICAL LEGISLATION.—Under the head of domestic correspondence in the present number of the JOURNAL, will be found a short and characteristic letter from Dr. A. L. Gihon, U. S. N., which contains further evidence (of which the world had abundance already) that some graduates of medical colleges are very illiterate, and closes with an earnest request that every member of the American Medical Association will "*pray*, if nothing else, that wisdom and courage may be given the Legislature of the State of New York to enact the law that will put that great commonwealth in line of battle with Illinois and West Virginia in the war against medical ignorance and incompetence, 'regular' as well as irregular." Inasmuch as our enthusiastic representative of the medical staff of the Navy has improved every opportunity, during the last few years, to show the gross ignorance of many doctors holding diplomas from some of the oldest and most respectable medical colleges in this country, it seems a little singular that he should ask the great body of the profession to engage in *prayer* for the enactment of more laws establishing State Boards, whose members are required to accept the diplomas of these same medical colleges as sufficient evidence of qualifications for a State license to practice medicine. The war that such boards can wage against "medical ignorance and incompetence," will never amount to more than light skirmishing along the out-posts, and is hardly worth *praying* for. Had he asked the members of the Association "to pray" that the Legislature of every State may have sufficient "wisdom and courage" to enact laws similar to those in Alabama, North Carolina aud Virginia, by which every man or woman proposing to enter upon the practice of medicine, shall demonstrate his or her qualifications, under a thorough examination by the State Board, without any regard whatever to medical college diplomas, we could have joined in the general prayer-meeting with some degree of enthusiasm.

QUESTIONS AND ANSWERS.—"*Dear Sir:* Is there any little manual containing the Code of Ethics, constitution, and by-laws of the American Medical Association? Questions are frequently asked me by men much older in the profession than I am, which can only be answered by reference to those articles, but they, like many of us younger men, do not happen to possess copies of the Transactions of the society. Would it not be well to publish the articles in the JOURNAL if they are not published in manual form?

A local medical society over fifteen years ago adopted a fee table. Said society never meets now. New physicians have come in who have never subscribed to said table; some that have 'cut rates' with irregulars, though they themselves are members of the A. M. A. What is to be done about it? x."

Answers.—We know of no manual or publication containing the constitution, by-laws, and Code of Ethics of the American Medical Association, except the Volume of Transactions published by the Association itself. The Code of Ethics alone was published in a neat little duodecimo volume by William Wood & Co., of New York, and could probably be procured at most of the larger medical book stores, or through almost any book dealer. Its price is 50 cents a copy, if I remember correctly. Unless otherwise ordered, the constitution, by-laws, and Code of Ethics will be republished in the last number of Vol. II of the journal of the Association, there being a standing rule requiring that they be published with the Transactions every year, more especially for the information of new members.

If the members of the profession in any town or county, after due notice, meet in convention and adopt a *fee bill*, we suppose the rates thus established would remain binding upon all members of the profession in that locality until revised or altered by another convention. But if an organized medical society, without regard to the profession as a whole, adopts a fee bill and then expires, we think its fee bill expires also, inasmuch as there remains no active organization for its enforcement.

THE PROFESSION IN NEW YORK AND THE ANNUAL MEETING OF THE AMERICAN MEDICAL ASSOCIATION.—We learn from a reliable source that the new State and County Medical Association in New York are prospering beyond the anticipations of their warmest friends. And through them the profession in that city and county will be well represented in the coming meeting of the National Association in Washington. As a large proportion of the county societies in other parts of that State have adhered to the National Code, and thereby preserved their right to representation in the national organization, it is probable that the whole State will be as fully represented in the National Association as in former years. There are also indications of a larger representation from the profession in the New England States than for many years past. All the circumstances indicate that the coming meeting in Washington will be one of the most important ever held.

JAMES MARSHALL AMBLER, M.D., U. S. N.—The remains of this heroic medical officer, who perished in the Polar exploring expedition of the ill-fated Jeannette, very recently arrived home under proper escort, and were buried in his native town in the interior of Virginia. Let no one fail to read the interesting obituary notice of him, under the head of Necrology, in the present number of the JOURNAL.

SOCIETY PROCEEDINGS.

CHICAGO MEDICAL SOCIETY.

Regular meeting, February 18, 1884.

Report of a case of ventral hernia in the male, with pathological specimen, by Dr. Wm. L. Axford.

Report of three cases of arrested fœtal development, in one of which there was an entire absence of the abdominal wall and the umbilical cord, by Dr. L. A. Harcourt.

We cite the important points of the first case presented as follows:

F. B., aged 56, weight 340 pounds. An enormously large and fleshy man; had been troubled for the past twenty years by a tumor situated above and to the left of the umbilicus. He did not know any cause for its appearance, having never been injured along the linea alba. At first the symptoms were those of a slowly-growing tumor. He wore a pad for a number of years, and in this way was able to keep the "mass" within bounds; but during the past five years it became uncontrollable, and had been a constant source of trouble, dating back to a very severe attack of constipation followed by severe vomiting. As near as could be ascertained at that time, he had all the symptoms of a strangulated hernia. Two years before death another strangulation occurred, and at that time Dr. Axford was invited to see him. The strangulation subsided in each instance under the use of opiates with rest in bed. In the intervals he had weekly attacks of what was described as a *hardening of the mass*. At such times it would increase to an unusually large size, and include the umbilicus in the swelling and become extremely painful, but he did not vomit. He would go immediately to bed, and after a day or two of rest it would again subside. When the writer first saw the case, at the time it was strangulated the second time, the tumor was about the size of an adult head, hard and tense, but resilient to the touch. Percussion gave dullness over the upper and left part of the mass, while over the lower two-thirds the percussion note was tympanitic. A variety of diagnoses had been made by a number of physicians, tumors of various kinds, particularly fatty tumor, hernia, hernia with fatty tumor, etc., etc. The physician who first treated the case evidently took it for hernia, as he treated it by a pad, and by this means controlled it for a long time.

The essayist believed it to be a ventral hernia when he first visited his patient, and that it contained intestine and omentum. He accounted for the dullness over the left and upper part by supposing that so large and obese a man would naturally have a thick, fatty omentum, which, from its anatomical relations, could easily occupy the left and upper portion of the hernial sac. Recently the patient died, with symptoms of strangulation similar to those of the two previous occasions. The sac of the hernia was exhibited to the society, and while no omentum was found in it at the autopsy, the sac contained a considerable portion of small intestine. As above stated, the case was one of twenty years' duration, and the tumor was always a great source of inconvenience, and at times exceedingly troublesome, aside from the two attacks of the symptoms of strangulation from which he barely recovered, while the third attack proved fatal. None of the physicians who previously attended him had diagnosed it to be ventral hernia, as these herniæ usually give rise to great gastric symptoms, which were present but a short time in the case of Mr. B. In the discussion which followed, considerable contrariety of opinion was expressed regarding the use of a rubber bandage applied in treating this variety of hernia, as well as the utility of it in femoral, strangulated femoral, and other forms of rupture that occur in both sexes. Its advantage was affirmed by some, and denied by others. It was also argued by one speaker that he personally had met a case of strangulated femoral hernia that recovered without sloughing or operation, and that, so far as he knew, little or no treatment had been carried out, which he admitted was a surprise to him; for when he was called to see the patient he was suffering acutely from well-marked symptoms of the strangulation, yet within a few days the man recovered, and resumed his duties attending a garden of which he was owner.

In the second paper, regarding "Maternal Impressions," the cited author the following cases, which constitute a synopsis only of his report:

CASE I.—On the 4th of March, 1881, attended Mrs. C. in labor with her fifth child. Some months before, she was threatened with an abortion, having had pain and hæmorrhage for several days, but rest and anodynes averted the calamity. An examination in the present case of confinement, revealed the os uteri to be about two-thirds dilated, the membranes protruding into the vagina, but only a membranous tumor could be felt by the finger. Thinking there might be a breech presentation, and that instrumental aid might be necessary in the delivery of the head, the doctor departed for his forceps two blocks away, requesting the lady to retire to bed at once. Returning in a few moments, he found her in severe pain, the membranes protruding from the vulva, and as the pain subsided, the index finger of the right hand was passed beyond the tumor, which was a spina bifida. The fœtal head was distinctly felt. The os uteri was fully dilated. He ruptured the membranes at the next pain, and almost in an instant the child was ushered into the world with extraordinary force. The warm blood was felt to gush into the operator's hand, and he feared he had a case of post-partum hæmorrhage to deal with. A glance at the woman's face banished this fear and he looked for some other explanation of the hæmorrhage. The child and placenta came into the world simultaneously. Looking at the child, which was alive, its face grew white; a second glance revealed the fact that its abdominal parietes were wanting. The anterior and part of the lateral walls of the abdomen were absent from a little above the os pubis to a little below the ensiform cartilage, leaving the abdominal viscera exposed. The intestines, of course, protruded; the bladder, kidneys, stomach and other organs could be distinctly seen and felt. The integument of the abdomen above, below and laterally *degenerated* into membrane, and a membranous fringe from three-fourths of an inch to an inch and a half in width, resembling that attached to the placenta, and from which something had been irregularly torn, encircled the opening. The lower extremities formed an obtuse angle with the body, the hips projecting to one side, as if the limbs of one fœtus had been engrafted obliquely upon the trunk of another. There was spinal curvature in the lumbar region. It was something of a monstrosity, the sex of which the writer has forgotten.

An examination of the child, the placenta, the vagina of the woman, and the bed, failed to discover the slightest trace of an umbilical cord, and the accoucheur's impression is, that the membranes were attached directly to the child's abdomen, and torn from it by the child's expulsion. The child lived only a few moments. The mother made a good recovery. She was not permitted to see the child until dressed, but knew that something was wrong, as no cord had been tied. She stated afterward, in explanation of the abnormal condition of things, that before she was threatened with the miscarriage she had seen a man who had fallen from a scaffold, whose abdomen was so torn that the intestines protruded from the rent, and who died in a few hours. The shock she received at the time, she thought, caused an arrest of fœtal development, giving rise to the condition mentioned.

In the interest of science, an effort was made to procure the child. The doctor offered to charge nothing for the services rendered, if they would give it to him. The father seemed to appreciate these motives, but the mother would not listen to the proposition under any circumstances. As nothing of this kind had ever occurred to him previously, nor within his professional knowledge, or in his reading, he was, for this reason, desirous of obtaining and keeping this specimen.

CASE II.—He was invited by Dr. Tousley, of Weyannega, Wis., 13 years ago, to see what the doctor called a headless child, recently born. Upon arriving at the house, found this statement only partially true, as the essential part of the head, *i. e.*, the brain, was there, a part of its osseous covering alone being absent. It was a case of imperfect or arrested development of the cranial vault, a part of the frontal, temporal, parietal and occipital bones being wanting. They were absent from a line beginning a little above the supraorbital arch, passing backward, arching slightly over each ear and passing through the occipital protuberance. The brain and its coverings were intact; the longitudinal fissure was well-marked, giving rise to two soft yielding tumors, which the doctor at first mistook for the breech; the face was broad and flat; the nose flattened; the eyes small, round and protruding, probably from pressure upon the brain during labor. Every feature was distorted and repulsive in the extreme, while the countenance resembled, in some measure, that of a hog. The mother was a native of Germany, and she, too, had an explanation to offer, namely: Some time after conception, she came suddenly where hogs were being butchered, and saw a number of them decapitated. She was startled, and hence, as she thought, her misfortune in giving birth to an *acephalous fœtus*.

The author gave a written report of an additional case, the principle facts of which were taken, and briefly stated as follows: The case occurred in Wisconsin under his immediate care. Some months before he confined the wife, he was called to see her husband, who had fallen from the rafters of a house, striking against the joists and sleepers in his descent, and sustaining some injury about the back of the neck and between the shoulders. The patient's shirt was removed to examine the injuries, when there was found an abrasion of the integument, and contusions extending from the occiput to the second or third dorsal vertebræ. The injuries, while not severe, looked bad at the time. The shoulders and upper part of the back were more or less spattered with blood. While undergoing this process, the wife came into the room, and on seeing her husband bleeding she became very much excited and alarmed. She was at that time in the third month of pregnancy. About four months later she prematurely gave birth to a child, on whose neck and between whose shoulders were marks, the exact counterpart of the injury sustained by its father some months before. A triangular space, extending from the occiput down-

wards between the shoulders, was covered by a reddish membrane (not skin), presenting in miniature the appearance of the father's neck when seen by the mother. Reddish spots were scattered about the back and shoulders, corresponding to the blood stains on the father. The child did not survive.

The Secretary knew that in Dr. Harcourt's experience he had seen the above cases, and at his request they have been presented to the society in this report, and are truthfully given by the author. Although scientists state, there are no such results from mental influences. Whether these impressions, or so-called mother's marks, and the attending or subsequent morbid developments, stand in the relation of cause and effect, or were mere coincidences? It was not his province to determine this, but they seem to confirm the belief entertained by many that "Jacob knew whereof he bargained, when he agreed with Laban to take as hire all the brown lambs and speckled goats and cattle born after a given date." In the discussion Dr. A. Lagorio recited briefly the main points concerning a case he saw last April, although the woman who had been confined was attended by a midwife. A baby was born having double hare lip, extending through the alæ of the nose. The nose was flattened, there was a cleft palate, the eyes were closed, and the lids could not be separated, there was no rotundity of the eye-balls. The child lived 15 or 20 days and died from inanition. At the autopsy there was discovered an entire absence of the eyes. The mother was 40 years old; an Italian. She had undergone during the period of her gestation great hardships, such as scrubbing, using a mattock to remove stumps and roots, picking up coal, carrying weights on her head, etc. The poor woman supposed the midwife to be a witch, and as such had marked her baby while "in utero." He believed there was no case on record in this country where a child was born without eyes, or where the lids could not be divided. In Vienna three cases have been reported where the eyes were missing, or where the eye-lids were closed at birth. In one of the cases the lids were separated and the eyes opened, and subsequently the child perceived objects.

Dr. S. J. Avery gave a history of a case he had seen. When called to attend a lady patient about to be confined, he ascertained that a breech presentation was the position that the child occupied; he got along very well until delivery of the shoulders, this was accomplished with more than ordinary difficulty. In the delivery of the head he discovered that it was hydrocephalic and measured, he thinks, eight or nine inches antero-posteriorly. In the delivery cephalotomy was performed. The mother recovered with no serious trouble or cellulitis.

Dr. J. G. Kiernan gave an abstract of a number of cases that had been reported in different journals purporting to be from embryologists. Some of the cases cited were very extraordinary. Men skilled in embryology have very little doubt but what a sudden and violent mental shock may arrest development in a fœtus.

The society then adjourned. L. H. M.

CHICAGO GYNÆCOLOGICAL SOCIETY.

CHICAGO, Feb. 15, 1884.—The Chicago Gynæcological Society held a regular monthly meeting, Friday evening, Feb. 15, in Parlor 4, Grand Pacific Hotel. The following paper on "Cirrhosis of the Pancreas; Pregnancy; Emaciation; Death," was read by Charles Warrington Earle, M.D.:

Several months ago I reported to the Chicago Medical Society two cases of cirrhosis of the pancreas, and before I have been able to find time to revise and re-write the article for publication, another case is presented to me, the notes of which are kindly presented by Dr. Joseph Haven:

Was first called to see Mrs. R. on Nov. 18, 1883, to relieve, if possible, the nausea and vomiting of pregnancy. She is American by birth, of nervous temperament, aged 36 years, and has been married thirteen years. She has had two children, both of whom are living, and eight years ago one miscarriage, which was followed by some uterine disease. Aside from this, she has always enjoyed comparatively good health. Up to three months ago menstruation had been regular, the amount normal, and pain not excessive. At this time menstruation ceased, and shortly after nausea and vomiting followed, for which she seeks relief. She states that six weeks ago her appetite began to fail, and she has gradually lost flesh from that time, but aside from nausea, she had experienced no pain or inconvenience of any kind; and inasmuch as she has always become very much reduced during previous pregnancies, she has paid little heed to this symptom.

I found the patient anæmic, much reduced in flesh, muscles flabby, and a general lack of vitality. Temperature normal, and physical examination elicits nothing aside from what would be caused by anæmia; the bowels are constipated.

I prescribed antacids, a laxative at bed time, and a general course of tonics and stimulants, including iron, hypophosphites, cod-liver oil, koumiss, and sherry wine.

November 23. Her husband called as directed, and reported that his wife's condition was much improved, the nausea relieved, and the appetite improving. She is ordered to continue the tonics and stimulants, and he is requested to report any change that might occur.

December 13. Was called in the night, and found patient in a critical condition; extremely emaciated, respirations slow and labored, radial pulse, scarcely perceptible, extremities cold, breath very offensive, articulation difficult, due in part to coexisting aphthæ, heavily coated tongue, sordes on the teeth. Husband states, that she has been failing several days.

December 14. Slight improvement; has revived somewhat under the use of stimulants.

December 15. Dr. Earle called in consultation; finds no symptoms other than those of anæmia and prostration, and suggests the possibility of obscure internal complications, such as disease of the pancreas.

December 16. Nourishment and stimulants by stomach and bowels give only temporary improve-

ment.

December 17. Died.

December 18. Post-mortem. Uterus enlarged to extent of three months pregnancy; all the other organs apparently normal, with exception of the pancreas, which is hard and contracted, a portion of which is removed for microscopical examination.

In the history of this case, from beginning to end, there has been a lack of symptoms other than a general failing of the powers of life. There has been no pain or other symptoms to locate the trouble in any particular organ. An analysis of urine failed to establish renal complications. It is to be regretted that the character of the fæcal dejections could not be ascertained as to presence of fat. There is no family history of scirrhus, constitutional, or wasting disease.

Discussion.—Dr. C. W. Earle: That diseases of this organ are rare, probably no one will deny, and although it is possible that affections of the pancreas may occur somewhat more frequently than we now suppose, their diagnosis must for obvious reasons always be difficult. Bartholow says that so little is definitely known of diseases of the pancreas, that many systematic works omit this subject altogether. Aitken, in his large work, does not speak of disease of this organ. Hartshorne, editing Watson, devotes about fifteen lines to the consideration of the subject. Flint and Wood have short articles, and I have looked through scores of bound volumes of journals without finding an allusion to disease of the pancreas. For anything like a comprehensive discussion of diseases of this organ we are obliged to go to Ziemssen. I cannot find a single case in all the books to which I have had access, where exhaustion from the anæmia of pregnancy has been associated with disease of the pancreas. The author of the article on diseases of the pancreas in Ziemssen's Cyclopædia, makes this one remark: "Pregnancy is believed by some authors to predispose to this (pancreatic) disease." The occurrence of three cases of disease of this organ in the practice of one individual in the course of three years, all of them proving fatal, and the diagnosis of all of them being demonstrated by microscopical examination, seems somewhat surprising. I have come to the conclusion that we have not up to this time paid as much attention to diseases of this organ as we should. I believe that a considerable number of cases that we suppose to be due to pernicious anæmia, leucocythæmia, etc., may be due to chronic disease of the pancreas. I shall place these cases on record as much to elicit inquiry and observation from other members of the profession, as from any other one thing. We frequently see cases in practice where there is very great emaciation, white color to all the integument, showing want of red blood corpuscles, and I have come to think that these changes may be due, at least in some cases, to disease of the pancreas. The functions of the pancreas, as now given by the latest authors of physiology, are as follows:

1. The pancreas digests fats and assists in the conversion of starch into sugar.

2. It assists in the digestion of albuminoid compounds.

The organ is, as will be remembered, sometimes called the "abdominal salivary gland;" and, reasoning from analagy, is it not possible that it may be disturbed somewhat as the salivary glands are disturbed?

The diagnosis wlll be difficult, if not impossible. The principal symptoms are emaciation, a flow of saliva-look ng fluid from mouth and vomiting of fatty matter, with the passage of fatty material from the bowels. During the course of these three cases I have looked up the literature very closely, and I mnst say, that even now, I do not think I would be able to diagnosticate a case. The microscopical changes are described and kindly furnished by Prof. Marie J. Mergler.

"On microscopical examination, the entire organ is found more or less altered, In some portions the connective tissue between the acini is increased, and many of the gland cells have undergone fatty degeneration, in others the broad bands of connective tissue encroach considerably upon the glands, and in place of their large polyhedral cells are found small irregular, shrivelled bodies, evidently atrophied gland cells, and still other sections do not even present a trace of gland structure, consisting entirely of connective tissue."

Dr. Merriman—Has the author in Ziemssen given any means of diagnosis during life?

Dr. Earle—Not only has none been given, but he says that no one of the possible symptoms can be relied upon as pathognomonic.

Dr. Earle then gave a brief history of the other two cases in his own practice, and also remarked that it was his opinion that frequently the pancreas was not noticed in ordinary post-mortems, and that a distinguished pathologist once told him that many medical men had never seen the organ.

Dr. Merriman—You mention in the second case increased salivary secretion. Now I should expect that, on account of the salivary glands, to a certain extent, having functions similar to that of the pancreas; for instance, changing starch into sugar. Was that symptom noticeable in the other cases?

Dr. Earle—I do not remember, but it has been noticed by others who have observed pancreatic disease; so much so that this is classed as one of the prominent symptoms.

Dr. Jno. Bartlett—When I was young I used to be accounted something of a gross pathologist. I have on several occasions made as many as five post-mortems in a day. I have made a good many post-mortems in my life, and it is my opinion that not once in fifty times is the pancreas looked at.

Dr. Sawyer—I remember being present at an autopsy that was made by Dr. Weber, the pathologist of the City Hospital of Boston, upon the body of a young girl supposed to have died from chlorosis. I remember the peculiar cast, the peculiar tint of the face presented by that corpse. I never saw anything like it. If all cases of chlorosis are as well marked as that one, then the disease can well be called chlorosis. Before opening the body Dr. Weber said to the class: "We shall probably find disease of the

pancreas, as it is one of those diseases accompanied by extreme bodily waste." I saw the pancreas in this case, and I believe it was the first time I ever saw it.

Dr. Merriman—I am more and more convinced that we don't begin to know about nutrition as we ought. I have a case of chlorosis in hand now, and this paper and discussion sets me to thinking more than ever before.

Dr. Jno. Bartlett then presented verbally a report of a "Difficult Case of Labor," which proved of decided interest and elicited much discussion.

The society then transacted some miscellaneous business, and adjourned. J. E. H.

STATE MEDICINE.

HEALTH IN MICHIGAN.

Reports to the State Board of Health, Lansing, by observers of diseases in different parts of the State, show the principal diseases which caused most sickness in Michigan, during the week ending Feb. 2, 1884, as follows:

NUMBER OF OBSERVERS HEARD FROM, THIRTY-EIGHT.		For preceding week.
DISEASES ARRANGED IN ORDER OF GREATEST AREA OF PREVALENCE.	Per cent. of observers who reported the disease present.	Per cent. of observers who reported the disease present.
Neuralgia	79	73
Bronchitis	66	68
Influenza	63	68
Rheumatism	63	70
Consumption, of lungs	63	50
Pneumonia	55	60
Tonsillitis	53	58
Intermittent fever	53	63
Remittent fever	37	28
Inflammation of kidneys	32	28
Erysipelas	29	20
Whooping-cough	24	25
Diarrhœa	21	35
Diphtheria	18	18
Scarlet fever	18	15
Inflammation of bowels	16	13
Dysentery	16	10
Measles	11	15
Membranous croup	8	5
Puerperal fever	8	5
Cholera morbus	5	3
Inflammation of brain	5	5

For the week ending February 2, 1884, the reports indicate that consumption, erysipelas, and remittent fever increased, andthat diarrhœa, intermittent fever, typhoid fever, and typho-malarial fever decreased in area of prevalence.

At the State capitol, the prevailing winds during the week ending February 5 were northwest; and, compared with the preceding week, the temperature was considerably higher, the absolute humidity considerably more, the relative humidity more, and the day and the night ozone less.

Compared with the average for the month of January in the preceding six years, neuralgia was more prevalent, and diphtheria, rheumatism, typho-malarial fever, bronchitis, scarlet fever, consumption, pneumonia, and remittent fever were less prevalent in January, 1884.

For the month of January, 1884, compared with the average of corresponding months for the six years, 1879-1884, the temperature was considerably lower, the absolute humidity less, the relative humidity more, the day ozone more, and the night ozone the same.

Including reports by regular observers and others, diphtheria was reported present during the week ending February 2 and since at eighteen places, namely, Attica, Arcadia, Belding, Detroit, East Saginaw, Flint, Grand Rapids, Hersey, Hillsdale, Linden, Northville, Newaygo, Owosso, Otsego, Pontiac, Ronald, Springfield, Saginaw. Scarlet fever at thirteen places, Detroit, Grand Rapids, Hersey, Kalamazoo, Lakeview, Mason, Monroe, Orleans, Otisco, Roxand, Saginaw, Salem, St. Clair. Measles at seven places, Elk Rapids, Flint township, Monroe, North Adams, Owosso, Pontiac and Saginaw.

HENRY B. BAKER, Secretary.

Lansing, Feb. 6, 1884.

Report of deaths in the city of Lansing, Mich., during the month of January, 1884:

Burial Permit No	Day of Death.	Name of Deceased.	Age. Years.	Months.	Days.	Sex.
477	3	Henry S. Ryan	49	1	11	M.
478	4	Mary A. Waldron	25	1	1	F.
479	5	Sarah Lemley	26	..	..	F.
481	6	Caspar Dunnebacke	22	9	14	M.
482	13	Richard Elliott	66	2	2	M.
484	19	Edward Dunnebacke	3	11	27	M.
483	20	Waterman Ward	56	11	20	M.
487	21	Katy Losey	3	3	23	F.
486	23	Julius Schnegenberg	35	6	..	M.
488	29	Zacheus Barnes	69	10	..	M.
489	30	Addie Turner	31	8	17	F.

Cause of Death.—478, 479, 481, consumption; 477, obstruction of bowels; 482, cancer of rectum; 484, spinal fever; 483, heart disease; 486, cancer of stomach; 487, hydrocephalus; 488, suicide; 489, ovariotomy.

Color.—All white.

Nativity.—478, 481, 484, 487, 489, Michigan 477, 479, 482, 483, 488, New York; 486, Germany.

Deaths in the city in January..... 11
Population, U. S. census, 1880..... 8,319
At rate in January, the deaths in one year per 1,000 inhabitants (annual death rate) would be..... 15,579

O. MARSHALL, M.D., Health Officer.

THE FEEDING OF INFANTS.—Dr. V. Poulain believes that the reason that cow's milk so often disagrees with children is to be found in the fact that cane sugar is used to sweeten it. In the *British Medical Journal* he says that he has used the sugar of milk with the best results.

DOMESTIC CORRESPONDENCE.

FROM WASHINGTON.

MEDICAL CORPS U. S. ARMY.—Ordered to Europe: Lieutenant-Colonel Joseph B. Brown and Major John S. Billings, surgeons, U. S. Army, will proceed to London (England) and to Copenhagen (Denmark) to attend the International Health Exhibition to be held at the former place in May next, and as delegates to the International Medical Congress which is to meet at the latter place in August next, and will include Berlin (Germany) in their route to or from Copenhagen.

MEDICAL CORPS, U. S. NAVY.—On account of the bitterness of the fight for the Surgeon-Generalship of the Navy, it is now thought likely that the President will not make an appointment to the vacancy until after the adjournment of Congress.

MATTERS OF MEDICAL INTEREST BEFORE CONGRESS.—On February 11 Mr. Blair introduced a bill (No. 1484) to the Senate, which provides for the study of physiology and the effect of intoxicating, narcotic, and poisonous substances upon life, health, and welfare, by the pupils in the public schools of the Territories and District of Columbia. The first section of this bill simply reiterates the title, specifying in addition that the simple rules for the preservation of life and health shall be taught, and that the substances referred to are those in common use by the people. Section 2 reads: "That teachers in the public schools shall be qualified to teach accordingly, and suitable text-books shall be used to facilitate the study and instruction provided for in the first section of this act: and such text-books shall be subject to rejection from use if found to be objectionable by the Commissioners of Education. This bill appears on the face of it to be a step in advance in education, but on considering it closer one sees that its provisions will have to be carried out with great care to furnish the proper amount and character of information. To teach the physiology of the present day as regards the use of intoxicating liquors, temperance, and not total abstinence, would have to be inculcated, and it is a question as to how far that can be taught to the mass of children. Then, again, as physiology grows older it becomes less and less positive and dogmatic in its principles, which would be injurious to minds not yet formed for reasoning; so there would be danger of a race of doubters on the one hand or of positivists on the other. As to the effect of poisonous substances, if this were considered with frankness and any degree of thoroughness, there would be added a large class to those already existing who take upon themselves to question and argue the plans of treatment and the drugs used by their attending physicians, and by their preconceived notions interfere materially with their own welfare. The clauses of "simple rules" and "substances in common use," are in a measure saving clauses, but it would not be difficult for ambitious teachers to stretch those boundaries ad libitum.

Feb. 15.—Mr. Logan introduced a bill before the Senate (15591) entitled "To define the title and duties of certain officers of the Medical Department of the Army. In effect it makes the six medical officers who hold the rank of Colonel to be styled Assistant Surgeon-Generals, and to rank in the order of seniority of dates of their commissions to that rank of Colonel. This makes Dr. J. H. Baxter the senior Assistant Surgeon-General, and continues his duties as Chief Medical Purveyor located in Washington city, and also makes him incontestably the next in the regular order of promotion to the rank of Surgeon-General. The second section gives to the medical officers bearing rank as Lieutenant-Colonels the title of Deputy Surgeon-Generals.

TO THE EDITOR OF THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION:

SIR:—That I might not assume to possess a monopoly in the collection of eccentricities in medical acquirements, a friend, not in the Navy, but a man of mark in the profession, too modest, however, to wish me to print his name, gave me, a few evenings ago, these additional evidences of that "regular medical education which is presumptive evidence of professional abilities and acquirements:"

"The *oracle* was full of black clots."

"diohrea."

"Ambrose Pare was a distinguished New York Surgeon," and

"Sore eyes," the phonetic guise in which *psoriasis* appeared on a formal medical record.

I quote them as fitting companion pieces to the following:

"the mad Stone that I hav advertised is as fine a one as I ever seen I hav no use for that one as I hav got one besides as it is useful to thos who has non when they need it it is as larg as 3 inches through and very wite addres ———."

I appeal to the members of the Association whether it is not the duty of every one of them to *pray*, if nothing else, that wisdom and courage may be given the Legislature of the State of New York to enact the law that will put that great commonwealth in line of battle with Illinois and West Virginia in the war against medical ignorance and incompetence, "regular" as well as irregular.

Very respectfully, your obedient servant,

ALBERT L. GIHON,
Medical Director U. S. Navy.

U. S. Naval Hospital, Washington, D. C., February 15, 1884.

FEBRUARY, 26, 1884.

EDITOR JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION:

Notwithstanding it was distinctly announced by yourself at the June meeting of the Association of 1883, that permanent members of the Association could not vote, except they were there as elected and duly certified delegates, holding credentials from

some one of the medical societies or associations known and recognized by the American Medical Association as legally organized bodies; there are some who still hold that a permanent member has an inherent right to an equal franchise with the certified delegates.

In the 2nd section of the articles or plan of organization, adopted and embodied in the Transactions twenty-four years ago, we find the following, which I think should settle this point, both in principle and in practice. It reads thus: "Permanent members shall at all times be entitled to attend the meetings, and participate in the affairs of the Association, so long as they shall continue to conform to its regulations, but without the right of voting." Now, the principle here involved is not only an important one, but a vital one. It was placed there, I conclude, and very wisely so, to protect every possible encroachment upon the fundamental principles underlying the plan and base-work of the Association from its first inception, as a *representative* body. And most certainly, were they allowed to take place, it would put a lever under the cornerstone of its base, which very soon would put a power where it would ultimately disintegrate, if not destroy its functions as a representative body.

Not long ago, the writer was conversing with a President of one of the State societies, who stated frankly that he had always voted in all the business transactions of the Association, and he thought he had a legitimate right to do so.

As no State society is likely to have its quota of delegates full, it is proper and right that every permanent member who intends to attend the meeting of the Association, should be furnished with proper credentials, and if he goes thus armed, he is ready for battle.

If we have a great, grand principle at stake, and underlying the base-work of our Association, let us by all means protect and support it.

D. H. B.

Providence, R. I., Feb. 26, 1884.

To the Editor of the Journal of the American Medical Association.

Sir:—Your correspondent, "Vindex," makes use of an argument much in favor among the advocates of the "New Code," when he refers to State statutes as defining "the meaning of the phrase—a regular doctor," and, therefore, by implication, compelling professional recognition of all sorts of "registered" practitioners. So persistently has this one string been harped upon, that some timorous minds seem to go in dread of undefined legal penalties for a refusal to consult with any casual ignoramus who may be certificated by a county clerk. And, as a matter of course, the controversy, as brought to the gaze of the general public, is made to serve as a platform, whereon to pose the martyred attidude of homœopathy.

In fact, the New York act has no more to do with consultations than with the parallax of arcturus. It merely prescribes that every person undertaking to obtain fees from patients must be registered in a county clerk's office, and the requirements for such registration are: either a diploma from some chartered college within the State, (be it homœopathic, lobelia-inflated "eclectic," "hygeio-therapeutic," or what not); a license from the censors of any county medical society, regular or irregular, under an act passed a few years ago; or the simple circumstance of having practiced medicine or surgery, with or without education or authorization, for ten years prior to the passage of the existing law. It is, therefore, evident that the "New Code" permits, if it do not ordain, consultations with the whole army of advertising charlatans, who have fleeced the public for more than a decade, and who, from the lego-technical point of view, are quite as much "legally qualified practitioners" as the disciples of Hahnemann. And, farther, if the State law be absolute in this respect, the converse of the proposition must be equally valid, and it must be a violation of the "New Code" to consult with Gross, or DaCosta, or others whom I could name, who are not "legally qualified" in the "Empire State."

The "tempest in a teapot" which has been raised over the code question—aside from the unfortunate publicity given to the professional wrangle—is as meaningless as it is illogical. In the first place, the partisans of irregular sects are as little inclined to ask our counsel, as we to give it, even if any possible benefit to the patient could result from a discussion of irreconcilably different views; in the second place, no law in this country can deprive a physician of his free agency to give or withhold his services. He may, as he sees fit, decline to attend a patient; he may, on purely personal grounds, refuse to consult with a practitioner whose medical orthodoxy is undisputed. If a "permissive clause" in the Code is to be discussed at all, let it be as an affair of personal inclination; not under the flimsy pretext of "conformity with State laws."

I am, sir, faithfully yours,

A New York Physician.

FOREIGN CORRESPONDENCE.

London, Feb. 7, 1884.

The Anthropological Society, at their annual meeting, had an entertaining paper read by Professor Flower, F.R.S., in which he dealt with the subject of ethnography, or the discrimination of race characteristics. Its importance to those who had to rule, he said, could hardly be overestimated in an empire like this, the population of which was composed of almost every diversity under which the human body and mind could manifest itself. The physical characteristics of race, so strongly marked in many cases, were probably always associated with equally or more diverse characteristics of temper and intellect. It was absolutely necessary, therefore, for the statesman who would govern successfully not to look upon human nature in the abstract, and endeavor to apply universal rules, but to consider the special moral, intellectual and social capabilities, wants and aspirations of each par-

ticular race with which he had to deal. A form of government under which one race would live happily and prosperously, would to another be a source of unendurable misery. When they had to deal with Egyptian fellahs, African negroes, American Indians, and Australian or Pacific islanders, it seemed almost impossible to find any common ground of union or *modus vivendi*. The mere contact of the races generally ended in the extermination of one of them. If such disastrous consequences could not be averted, they had it still in their power to mitigate those evils. All the questions should be carefully studied by those who had any share in the government of races alien to themselves, and a knowledge of them meant the happiness and prosperity, or the reverse, of millions of their fellow-creatures.

The air of sunny Italy is supposed to have a beneficial effect upon the voice; however, a new invention by Dr. Carter Moffat, a connection by marriage with Livingstone, is likely to give the *coup de grace* to Italian vocal supremacy. Dr. Moffat gravely proposes to introduce at our homes the chief ingredients of Italian air. He suggests to vocalists an instrument called the "ammoniaphone," which, he explains, contains an absorbent material saturated with peroxide of hydrogen, combined with condensed ammonia and other ingredients, through which a current of air is drawn into the lungs. The doctor calls this "highly concentrated artificial Italianized air." He tried it on himself for fourteen days; his chest expanded half an inch, and his voice, which had previously been weak, became a tenor of extraordinary range. The experiments continue, and the results are awaited with interest by his many friends.

Some three years ago a hospital was instituted at 16 and 17 Fitzroy Square, for the accommodation of persons suffering from acute diseases, who were in a position to pay for their medical attendance and maintenance. The institution was called a Home Hospital, and it has been found a "home" in the best meaning of the word by many who would, otherwise, have had to go through the expense and discomfort of an illness either in an hotel, in lodgings, or in one of the large public hospitals. Here, however, each patient finds neither the noise, general bustle, or absence of privacy of an hotel on the one hand, nor the damp sheets, slipshod attendance and great discomforts of ordinary lodgings on the other. It is now proposed to raise funds to open and maintain a branch Convalescent Home Hospital at some suitable spot in the country. At the present time, when a patient becomes convalescent and he is ordered change of air, it becomes a matter of extreme worry and anxiety in proportion to the serious nature of the attack from which he is recovering, and too often much ground is lost whilst a suitable neighborhood is being sought. The committee who are working out the present scheme propose to have appliances and conveyances adapted for the removal of the sufferer from his residence to their "home." The additional capital required is £10,000, contributors of 50 guineas or 20 guineas each become eligible for election as governors and members of the association with the privileges of obtaining (1) priority of admission for themselves and their families when ill and two nominations each year, if governors, and priority of admission for themselves only if members. It is thought, that, considering the advantages gained, the amount required will be soon subscribed.

The condition of the Mercantile Marine Medical Service is again attracting attention, especially the arrangements as to the Atlantic Service. At present too often the accommodation of the medical officers is most unsatisfactory, and where "hospital room" is supposed to be provided for the use of any of the passengers or crew requiring it, it practically exists in theory only. It is considered by those who know anything of the requirements of a large ship that it is high time that Government stepped in, and by act of Parliament compelled ship owners to provide good quarters for the medical officers and suitable accommodation in case of illness or accident. The pay of the service must be increased and the medical officers made answerable only to their department, not as at present, subject to every whim of the commander of the ship and to discharge upon the termination of each voyage, should he be considered too energetic by those on shore. It would be of advantage to all were the service made so that the medical officer should have an increasing salary according to length of service, so that the Mercantile Service would be a permanent pursuit, not, as at present, an affair of a trip or two.

The well-known botanist, Dr. I. H. Balfour, F.R.S., has just died at Edinburgh. He was late Emeritus Professor of Medicine and Botany in the University of Edinburgh. He wrote much on botanical science and stood high in public estimation. Professor Bayley Balfour, who was only on Saturday last elected to the chair of Botany, at Oxford University, is a son of Dr. Balfour, and assisted his father for eight years at Edinburgh. It appears during the past year 4,732 books were published. Theology heads the list with 794 volumes, and medical and surgical treatises 163. Thus medicine and surgery are only liable for one twenty-second part of the newly issued volumes for the year 1883 in Great Britan.

G. O. M.

NECROLOGY.

AMBLER, JAMES MARSHALL, M.D., late Passed Assistant Surgeon U. S. Navy. On Sunday, Feb. 24, a hero of the medical profession was buried. The body of the late Passed Assistant Surgeon James Marshall Ambler, M.D., U. S. Navy, was on Saturday evening conveyed from the Navy-Yard, Brooklyn, N. Y., where it had lain in state from the previous day, with three of his comrades of the Jeannette Polar Expedition, to the Pennsylvania railroad station in Jersey City, for the last stage in the long journey from the mouth of the Lena to its final resting-place near his place of birth in the mountains of Virginia, and left by the nine o'clock train, under the escort of the following officers: Chief Engineer George W. Melville; Surgeon Charles W. Gravatt; Passed

Assistant Surgeons George E. A. Harmon, James H. Gaines, Presley M. Rixey, and Walter McClurg, and Lieutenants Wm. H. Jaques, John Danenhower, and Wm. H. Scheutze. They were joined at Baltimore at six o'clock on Sunday morning by representatives from the Medico-Chirurgical Faculty of the State of Maryland, the Faculty of the University of Maryland, and the Clinical Society of Baltimore, viz: Professor L. M'Lane Tiffany, M.D., of the University, one of Dr. Ambler's instructors; G. Guy Holliday, M.D., his former associate in practice; James McHenry Howard, M.D., Ridgely Howard, M.D., and Henry Howard, Esq., of Baltimore.

The body was met at the Baltimore & Potomac depot in Washington at 8 o'clock by Medical Directors John M. Browne and Albert L. Gihon; Surgeons Wm. K. Van Reypen and Charles H. White, and Passed Assistant Surgeons Thomas H. Streets, Edward H. Green and Francis M. Nash, and transferred to the special train which had been tendered by the Hon. John S. Barbour, M. C. of Virginia, President of the Virginia Midland Railroad.

It left Washington at nine o'clock, and was joined at Alexandria, Va., by Messrs. Edward C. Marshall, of Alexandria and John Ambler, of Amherst Co., Va., cousins, and C. S. Taylor, Jr., of Alexandria, a classmate of Dr. Ambler.

The funeral train was received with demonstrations of respect at Manassas and other places along the route, and at 2 P. M. reached Markham, Va., where the body was placed in a hearse and covered with the Union Jack and the floral wreaths, which had been accumulating all the way from Siberia. The following officers acted as pall-bearers: Surgeon Wm. K. Van Reypen, U.S.N., Acting Chief of the Bureau of Medicine and Surgery; Medical Director John M. Browne, U. S. N., of the Museum of Hygiene; Medical Director Albert L. Gihon, U. S. N., of the Naval Hospital at Washington; Surgeon Charles H. White, U. S. N., of the Physiological Laboratory, Washington; Chief Engineer George A. Melville, U. S. N.; and Lieutenant John A. Danenhower, U. S. N.; the surviving shipmates of Dr. Ambler, Lieutenant Wm. H. Scheutze, U. S. N., who had brought his remains from Siberia, and Lieutenant William H. Jaques, U.S.N., representing the Secretary of the Navy.

The funeral procession was very long, the line of carriages being followed by several hundred of the residents of Fauquier County, mounted, among them many of Dr. Ambler's former comrades in Ashby's corps of Confederate cavalry.

The ceremonies took place at Leeds Episcopal Church, which was about five miles from Markham, midway between it and "The Dell," Dr. Ambler's former home; the services being performed by the Rev. H. B. Lee, a classmate of Dr. Ambler at the Washington and Lee University. After the funeral his only sister and two brothers received the officers of the escort in the vestry, his mother being prevented from attending by her age and grief.

After the grave was filled, it was covered by the Russian, German, and American floral offerings, forming a floral mound under which it was completely hidden.

The late colleagues of Dr. Ambler in the medical corps of the Navy, propose erecting a monument over his grave in the Leeds churchyard, and the medical Faculty of the University of Maryland will place a memorial tablet in their hall at Baltimore.

The following tribute to his memory is from the pen of an intimate friend and classmate, and recounts in fitting terms the story of his worth and heroism:

"To those who knew his worth no word is needed to perpetuate his memory, for he possessed in no common degree the various qualities that go to make the thorough man, and was thus apt to leave a firm impress upon the memory of those with whom he was thrown in contact. It is right, however, that those who witnessed yesterday's procession should know something of him who took so sad and silent a part, and that the memory of one whose life was surrendered under such appalling circumstances as was his, should not dwell in the hearts of his personal friends alone, but he fastened upon the minds of all who admire honor, bravery, and self-sacrifice at his country's call.

"Dr. Ambler was born in Fauquier county, Va., December 30, 1848, and came of a long line of good ancestral stock—the Marshalls, the Carys, and Amblers, names intimately and always honorably connected with the history of Virginia since her early colonial days.

"As to his early boyhood, which was spent at and about his mountain home, there was nothing—so far as the writer knows—of phenomenal precocity or special interest.

"While maturing into manhood, with the development of a fine physique and much manly grace the intellectual growth kept pace. His mind was comprehensive and he read much and read well, the books found about him always being of an elevating and improving character. The knowledge thus gained, together with a ready command of language and an unusually clear insight into human nature for one of his years, put him at ease in discussions on multifarious subjects. It also enlarged his views of life and increased the liberality of his ideas towards his fellow men.

"Though possessing more of the really manly attributes than are allotted to most, there was no obtrusive display of them—no affectation.

"In casting about for life's occupation he decided upon the medical profession, and graduated at the University of Maryland in March, 1869.

"On the 1st of April, 1874, he entered the naval service as Assistant Surgeon, and was soon after ordered to the United States steamer Mayflower. In 1874–5 he was attached to the United States steamer Kansas, North Atlantic station, and in 1876 was on board the United States training ship Minnesota. He was promoted to Passed Assistant-Surgeon in 1877. During that year and part of the next he formed one of the staff at the Naval Hospital, Norfolk, Va.

"While there he received a telegram from the Navy Department, asking if he would volunteer for duty on

the Jeannette, which was to be sent in search of a passage to the North Pole. Up to that time the idea of seeking fame among the frozen seas of the north had not been entertained by him; but, not wishing to have his name coupled with a refusal where hardship and probable danger were involved, he promptly accepted. This he certainly would not have done had he known, as he soon afterward learned, that the same offer on request had been declined by others. It presented, however, an opportunity for a display of that manly stuff of which he was made. He did not, for this reason, recede from the responsibility he had assumed, but unremittingly bent every energy to secure success to the enterprise so far as in his power lay, and to his painstaking examination as to the physical qualifications of the personnel of the Jeannette's crew, to his zeal and forethought in providing the necessities of life under the peculiar conditions to which the ship's company were to be subjected, and to his wise hygienic and sanitary suggestions, may be ascribed for the most part the vigorous health of the officers and men, enabling them finally to encounter unprecedented labor and exposure. The immunity from that terrific scourge of polar travelers, scurvy, in which the Jeannette expedition stands prominently alone, were there nothing else, should be a lasting memorial to his professional capacity and foresight. But the mouths of the survivors of that ill-fated expedition have opened to testify how grandly he arose to all emergencies. They portray him as the genial companion, the skilful surgeon, the accomplished physician and sturdy officer. Melville, when asked by the court whom of the expedition he would specially commend for his behavior, promptly replied, 'Dr. Ambler,' and he was unstinted in his praise of him. During the famous retreat over the ice Ambler was one of the leading spirits. He harnessed two half-starved Esquimaux dogs to a sled of his own contriving, on which were lashed the surgical instruments, medical stores and scientific records; and leaving them to follow in the rear with the sick, the doctor took his place in advance day after day, as chief of the roadmakers. He wielded a heavy sledge hammer like a Hercules, breaking down ice hummocks to level a road for the boats. It was related of him that he invariably, when the day's work began, took up the heaviest of the sledges, thus setting an encouraging example to the men. We see see him laying this down for a moment to perform an iridectomy, one of the most delicate operations in eye surgery. After De Long's boats had reached the Lena delta, and failing to find succor for three weeks or longer, the commander decided to send two of the strongest of his party in advance to seek aid. The main body travelled very slowly, most of them being scarcely able to walk at all, and having to transport the sick. De Long was able to walk only for five minutes at a time. Ambler was the strongest of the party, and the commanding officer selected him and Nindeman to go on ahead for succor and to save their own lives, if possible, both of them being capable of a long march. When this was communicated to the doctor, he told his commander that he thought he ought not to leave his sick, as he preferred to share their fortunes to the end, and his going away would look like abandoning them. This doubtless touched the gallant De Long, whose first thought seems ever to have been his high duty to those under his command. Noros was then sent in Ambler's stead, and his life was saved. Ambler remained with his sick comrades to the last, and died with them. It is doubtful if the medical profession affords anywhere a finer example of heroism than this. Imprisonment on board an ice-bound ship for twenty-two months, a painful retreat over weary miles of rough ice, with half-frozen hands and feet, and then wandering about on an unknown shore for three weeks, reduced to a mere struggle for existence, yet not for a moment was blunted his keen sense of professional duty. Melville, who found the bodies, is of the opinion that Ambler was the last one to die. His frozen body was found in a sitting attitude, clothed in many suits of extra clothing, seizing in his right hand De Long's pistol, taken from his dead commander's pocket; in solemn and faithful guard over his dead comrades. None will ever know the dreadful extent of his sufferings during those last hours, or possibly days, of his life, alone with his dead, starving, exhausted and hopeless. Faithful messengers sent by his grateful country have brought home the mortal remains of this noble son to an aged mother, to lie at rest in his own village churchyard in Fauquier county, Va. Peace to him and her, and honor to the memory of this noble surgeon, whose life was given to his country and his duty."

A. L. G.

BEARDSLEY, LUCIUS NICHOLS, M.D., was born in Monroe, Conn., Oct. 8, 1814; died at his residence, in Milford, Nov. 22, 1880. He commenced the study of medicine somewhat early in life under competent instructors, and finally entered, as a private pupil, the office of Dr. Eli Ives, of New Haven, then Professor of the Theory and Practice of Medicine. He was graduated as M.D. at Yale College in March, 1838, and settled in Milford, Connecticut, the same month.

Dr. Beardsley was early admitted into the New Haven County Medical Society, on several occasions was chosen dissertator, and was specially appointed to prepare an account of the dysentery as it appeared in the summer and autumn of 1844. This paper was received with marked favor. Dr. Beardsley was several times elected Fellow of the State Medical Convention, and also President of the New Haven County Society. The use of ether as an anæsthetic agent was discovered after his settlement in Milford, in which subject he took great interest, being among the first at that time to give ether a trial in minor operations. He was particularly desirous, as a matter of justice, that the unfortunate Dr. Horace Wells should receive the honor as the discoverer, This appears from resolutions read by him at the State Convention held at Hartford in 1853.

Dr. Beardsley was elected delegate from the State and County Medical Societies, and attended the sessions of the American Medical Association, first in 1853, then '55, '60, '63 and 1864.

At the meeting of the National Association in New Haven, in 1860, which was the only convention of the Society ever held in the State, Dr. Beardsley served as chairman of the Connecticut delegation, and was thereby largely instrumental in securing the nomination and election of his old preceptor, Dr. Ives, to the high office of President of the American Medical Association. At the next Convention of the Association, which occurred in Chicago, in 1863, Dr. Beardsley was again preferred chairman of the Connecticut delegation, and as Dr. Ives had died since the last gathering, an "in memoriam" was offered by him, which resolutions were commended and unanimously adopted.

For a period of twenty-five years Dr. Beardsley was a subscriber to the *Boston Medical and Surgical Journal*, and an occasional contributor to its columns. He pmblished a monograph, in that journal, of the diphtheria as it prevailed in Orange in 1859. This article was copied into a number of leading journals in the country and has already been received as authority on this disease.

In 1877, owing to failing health, he relinquished practice and sought by retirement and frequent sojourns in a southern climate to regain that vigor which a constant practice had taxed so severely, but his hopes and the expectations of a wide circle of friends could not be realized.

As a practitioner, Dr. Beardsley was possessed of a remarkable measure of common sense and cool judgment. To a habit of confirming premises and cautiously reaching conclusions is to be referred the weight that his persuasions carried in medical circles. His tact as an accoucheur was widely known.

As a scholar his acquaintance with general, as well as medical literature, was extended. He was quite proficient in rendering the Latin authors, and his zeal as a student led him to follow closely every new revelation of science, as well as to verify fresh suggestions or recent appliances in medicine or surgery.

Dr. Beardsley's wit was always refined and without malice. This, coupled with an ease of declamation and a fertility of expression, made him a popular speaker. In every gathering his voice was heard in the vindication of truth and progress. Like his deeds, his words were full of benevolence, and always loyal to his belief.

CHARLES H. PINNEY, M.D., of Com.

MISCELLANEOUS.

EXTRACTS FROM FRENCH JOURNALS.

TO THE MEDICAL RECORD.—*Le Médecin Moniteur de la Policlinique* takes up the first page of its six in an amusing article under the above heading: "There is published weekly at New York a medical journal entitled *The Medical Record*. This journal contains in each number twenty-eight to forty pages of advertisements of 200 lines each. It is a veritable cocoanut in which the enormous kernel, surrounded by its filamentous husk, only contains a small quantity of rancid cream. This journal, which we have often searched in vain for something worthy of reproduction, published in one of its late numbers an anonymous article entitled 'French Medical Journals.' This consists of a formal requisition against French science. For several years it has been the fashion among foreigners to discredit France, to criticise her politics, to speak with disdain of her armies, with contempt of her literature, with injustice of her savans. However, the great nations act with us, follow the evolution of our ideas, keep pace with our works, communicate theirs to us, and are proud to see their savans take part in our institutes and academies. The little countries, on the contrary, are jealous of us, detest us, and seem to reproach us for having been for so long a time their only scientific and literary guide.

"The former respectful attitude weighs upon their pride of to-day. The children become adults, seek to bite the great nation which gave them the breath of intellectual life. Listen to this Yankee of a *Medical Record*: 'At the present time, with the great excellence of American medical journals, it is hardly necessary for a practitioner to understand French and German in order to keep abreast of the time.' This is what might be called arrogance, Mr. Yankee. It is true that an admitted preëminence in beauty and clearness of style is given to French writers, but it is impressively added, this species of superiority is of little importance in a periodical literature, and it may be said that the greater part of French journals are the worst among civilized nations. They are for the most part made up of the documents of the Paris medical societies.' And with what, then, my dear, would you have us make up our journals? Our readers desire to be kept posted in science, physiology, and clinical medicine. What do you give yours to read independent of your forty pages of advertisements? You admit that one of the most attractive parts of our journals is the *feuilleton*, in which we exhibit much wit. We cannot say as much for you, for, as you well express it: 'While as for England and America, there has not enough wit appeared for some years to spoil a single doctor.' You are mistaken, my friend; your countryman, Dr. Tanner, has given proofs of great practical wit. He has gained many dollars in laughing at his confreres and the good American public. You have all been gulled (coupé dans la fumistène) with a naive enthusiasm which proves little in favor of your judgment. You have done a fine thing in calling Locke to your aid, and in making him say that the witty man cannot have a superior judgment, and consequently the French, being men of wit, cannot be great doctors. You have proved in many circumstances that you are neither one nor the other. And if you had an ounce of good sense you would be careful how you atacked French journalism, which has the great merit of having educated you. It is due to it that you have known the works of Bichat and of Lænnec; it is due to it that you have been able to read the clinical lectures of Bouillaud and of Rostan, of Trousseau, of Velpeau, of Nelaton, of Jules Guérin, of Charcot, of Peau, and of many others; it is due to it again that you have been able to familiarize yourselves with the great

discoveries of our physiologists, Claude Bernard, Flourens, and Pasteur. Poor people! You have dared to say, 'It has been said that a French surgeon or physician must make his *mot* in order to make his mark!' You then have forgotten that it is from these physicians and these surgeons that you have learned the little that you know; it is they who have polished you, who have allowed you to translate their works, and even to plagiarize from them without shame. It may be that the number of French journals is too great; 'that only those devoted to a specialty contain anything worth reading,' as you say; but it is not for you, Americans, to be permitted to reproach us—you, a people peculiarly practical and but little scrupulous. You ask us obsequiously for exchanges; you read us; you steal from us; and you turn upon us with injurious words. You are a people without education, without wit, without intelligence. You are still Redskins.

"*Note.*—It should be well understood that this refers not to the great mass of American citizens so sympathetic with France, but to certain rapacious Anglo-Germans, who steal from us while slandering us, and who have vowed a hate of race against us."

SANITARY CONVENTION AT HILLSDALE, MICH., under the auspices of the State Board of Health, arrangements having been made by a local committee of citizens of Hillsdale, acting with a committee of the State Board of Health.

Time and Place.—You are cordially invited to be present at the sessions of a Sanitary Convention which will be held in Hillsdale, Mich., on Thursday and Friday, April 17–18, 1884.

Sessions.—There will be sessions the first day at 2 P. M. and 7:30 P. M.; on the second day at 9 A. M., 2 P. M., and 7:30 P. M., standard time. At each session of the Convention there will be addresses or papers on subjects of general interest pertaining to public health; each paper to be followed by a discussion of the subject treated.

Officers of the Convention.—President—Hon. E. L. Koon. Vice Presidents—Hon. Charles M. Croswell, Adrian; Hon. Witter J. Baxter, Jonesville; Hon. George C. Willis, Moscow; Hon. Nathan Alvord, Camden; Hon. J. H. Bennett, M.D., Coldwater; Rev. Linus Parmalee, Reading; Hon. F. M. Holloway, Hillsdale; Prof. A. E. Haynes, Hillsdale; Hon. Charles S. Veeder, Hillsdale; Hon. M. McIntyre, Hillsdale; A. R. Smart, M.D., Hudson; Prof Napoleon Clark, Ransom. Secretary—Bion Whelan, M.D., Hillsdale. Assistant Secretary—Chauncey F. Cook, Hillsdale.

Admission.—The admission to all sessions of this Convention will be free, and the public are cordially invited. The invitation is especially extended to health officers to be present and take part in the discussions.

Objects of the Convention.—The objects of the Convention are the presentation of facts, the comparison of views, and the discussion of methods relating to the prevention of sickness and deaths, and the improvement of the conditions of living.

Addresses and Subjects to be Presented and Discussed.—An address by the President of the Convention, Hon. E. L. Koon. Among the subjects which it is expected will be presented and discussed are the following: 1. The Water Supply of Hillsdale. 2. Drainage and Sewerage. 3. The Disposal of Waste Matter. 4. Coöperation of Citizens in Preventing the Spread of Diseases. 5. The Sanitary Condition of School Buildings and Grounds. 6. How Best Fulfill the New Law Respecting the Teaching of the Effects of Alcohol, etc., in the Public Schools. 7. Ventilation. 8. The Preparation of Food. 9. The Adulteration of Food. 10. Public Health Laws. The papers are expected to be original contributions, which when read are to be considered the property of the Convention, and to be left with the Secretary. Programmes will be issued before the Convention.

Committee from the State Board of Health.—J. H. Kellogg, M.D., Battle Creek; Henry B. Baker, M.D., Lansing.

Local Committee.—A. F. Whelan, M.D., Chairman; Hon. Harvey B. Rowlson; C. C. Johnson, M.D.; Hon. F. M. Stewart; R. A. Everett, M.D.; Hon. Charles S. Veeder; Chauncey F. Cook, Esq.; Rev. M. S. Burnham; C. I. King, M.D.; Prof. A. E. Haynes; Rev. J. M. Barkley; John W. Falley, M.D.; L. A. Goodrich, PH.C.

Reduced fare on railroads may be obtained by applying to the secretary of the Convention, for certificates to be presented to local ticket agents. For further information address Bion Whelan, M.D., Secretary, Hillsdale, Mich.

NEW BOOKS.

Roosa, Daniel B. St. John. A Doctor's Suggestions; being a series of papers upon various subjects, from a physician's standpoint. New York: J. H. Vail & Co. 12mo. 234 pp. Cloth, $1.50.

Seguin, E. C. Opera Minora. A collection of essays, articles, lectures and addresses from 1866 to 1882 inclusive. New York: G. P. Putnam's Sons. 8vo. 687 pp. Cloth, $5.

Ware, J. Hints to Young Men on the True Relation of the Sexes. Boston: Cuppler, Upham & Co. 16mo. 65 pp. Cloth, 75c.

Ewart, J. C. The Dissection of the Frog. 8vo. London: Simpkin. 1s. 6d.

Gant, F. J. Diseases of the Bladder, Prostate Gland and Urethra. 5th ed., 8vo. 622 pp. London: Bailliere. 12s. 6d.

Hartridge, G. The Refraction of the Eye. A manual for students. 87 illustrations. 8vo. 212 pp. London: Churchill. 5s.

Medical Annual and Practitioners' Index. A yearly record of useful information on subjects relating to the medical profession. 12mo. 300 pp. London: Kimpton. 3s. 6d.

Nightingale, Florence. Notes on Nursing. What it is and what it is not New ed. 8vo. London: Harrison. 2s.

Almanach général de médecine et de pharmacie pourla France, l'Algérie et les colonies, publié par l'administration de l'Union Medicale. 54 année. 12mo. 644 pp. Paris: 3 francs.

Boudet, E. Contribution à l'etude du Fibroma Molluscum. 8vo. 98 pp. Paris: Davy.

Capon, Z. Contribution à l'etude des rétinites syphilitiques et en particulier de la rétinite périmaculaire. 8vo. 42 pp. Paris: Davy.

Dorré, L. L'infection de Paris et de la banlieue. 8vo. 36 pp. Paris: Ves, Renon, Malde et Cock.

Faucon, A. Accidents dus a l'anaesthésié par le chloroforme. Trois cas de syncope chloroformique combattus avec succes. 8vo. 19 pp. Paris: J. B. Baillicre et fils.

Gachassin, G. De la rètroversion de l'utérus au point de vue de la stérilité acquise. 8vo. 47 pp. Paris: Davy.

Gerente, W. De l'érysipele de la face dans lecours de la fiévre typhoide (etude critique et clinique). 8vo. 62 pp. Paris: Davy.

Guerrnonprez, F. Plaies par peignes de filature. 8vo. 40 pp. Paris: J. B. Bailliere et fils.

Herck, J. De quelques cas de épistaxis critiques dans la fiévre typhoide. 8vo. 51 pp. Paris: Davy.

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Pillot, C. De l'Anéurysme des os. 8vo. 81 pp. Paris: Davy.

Bock, Emil. die Pfropfung v. Haut u. Schleimhaut aufo culistischem Gebiete. 8vo. v. 82 pp. Wien Braumuller.

Klinik, Wiener. 12 Hft. Ueber Harnblasenstein Von Prof. Dr. Jos Kovàes. Wien: Urban & Schwarzenberg.

Kolaczek, Johs. Grundriss der Chirurgie. 8vo. x. 282 pp. Berlin: Th. Fischer.

Kubiezek, Frz. W. Heilung chronischer Nervenkrankheiten auf naturgemässem Wege 3 Auft. 8vo. 118 pp. Wien: Huber & Labure.

Kühner, A. wie sind Epileptiker zu behandeln. 8vo 31 pp. Neuwied, Heuser.

Mayer, F. sur le traitement de la diphthérie des amygdales et du pharynx. 8vo. 11 pp. Aachen, Mayer.

Mettenheimer, C. üb die hygienische Bedentung der Ostsee insbesond, Berücksicht, der Kinderheilstätten au den Seckusten. 8vo. 64 pp. Berlin: Hirschwald.

Strümpell, Adf. Lehrbuch der speciallen Pathologie u. Therapie der inneren Krankhciten 2 Bd. 1 Thl. Krankheiten d. Newensystem. 48 abbildg. 8vo. vi. 444 pp. Leipzig: F C. W. Vogel.

Voelk, Heinr. die Kinder Tödtung in gerichtlich medicinischer Bezeihung. Inaugural Abhandlg. 8vo. v. 58 pp. München: J. A. Finsterlin.

Hamilton, Allan McLane. A Manual of Medical Jurisprudence with Special Reference to Diseases and Injuries of the Nervous System. New York: Bermingham & Co. 10x17. 380 pp. 12mo. Cloth, $3.

Zundel, A. The Horse's Foot and its Diseases. From the French by A. Liautard. New York: W. R. Jenkins. Illustrated. 8vo. Cloth, $1 50.

Amat, C. Théorie de la vision chez les opérés de cataracte. 8vo. 7 pp. Alger, Fontana et Cie.

Aubert, P. La Chaleur et le Chancre simple. 8 vo. 12 pp. Lyon: Levry.

Audry, J. Etude sur l'hydropneumopéricarde. 8vo. 97 pp. Lyon: Waltener et Cie.

Bernard, N. Contributions à l'étude clinique des ruptures tendineuses du triceps fémoral. 4to. 73 pp. Montpellier: Cristin, Serre et Ricome.

Bemasconi, E. Des effets toxiques du bihcromate de potasse. 4to. 84 pp. Lyon: Duc et Demaison.

Blanc, L. Contribution à l'etude expérimentale des lesions du foie dans quelques emprosonnements aigus. 4to. 57 pp. Lyon: Pitrat ainé.

Bosch, J. Des émissions sanguines locales dans le traitement des accés pernicieux cérébraux et délirants. 4to. 24 pp Montpellier: Hamelin freres.

Boyer, J. De l'albuminuric liée aux irritations cutanées. 4to. 92 pp. Lyon. Duc et Demaison.

Cabriel, A. Considerations sur les déviations de la blennorrhagie vers les organes générateurs et sur leurs complications. 4to. 63 pp. Montpellier: Boehm et fils.

Chassagny. Myome utérine, traitement par l'appareil élytroptérygoide. 8vo. 16 pp. Lyon: Paris: G. Masson.

Courboulés, P. J. Contribution à l'etude de la nature et de la prophylaxie de la septicémie gangréneuse. 4to. 67 pp. Lyon: Duc et Demaison.

Demon, F. Développement de la portion sousdiaphragmatique du tube digestif. 4to. 126 pp. Planches. Lille: Danel.

Dupard, O. Contribution à l'etude de certains principes toxiques des urines. 4to. 52 pp. Lyon. Duc et Demaison.

Foucheraud, A. Contribution à l'etude de la physiologie pathologique de la chorée. 4to. 75 pp. Lyon: Pitrat ainé.

Ginié. J. A. De la cachexie pachydermique. 4to. 103 pp. Montpellier: Hamelin freres.

Goullioud, P. Des ostéites dubassin au point de vue de leur pathogénée et de leur traitement. 8vo, 132 pp. Lyon: Waltener et Cie.

Guide pratique de l'etudiant en médecine et en pharmacie. 18mo. 302 pp. Paris: Ollier-Henry.

Jouvencel, P. de. Le Choléra, symptomes, mesures préventives. 18mo. 24 pp. Paris: Lib. centrale des publications populaires.

Official List of Changes in the Stations and Duties of Officers Serving in the Medical Department United States Army, from February 22, 1884, to February 26, 1884.

Brown, Joseph B., Lieutenant-Colonel, and Billings, John S., Major, Surgeons, directed to attend the International Health Exhibition in London, and, as delegates, the International Medical Congress at Copenhagen, to be held in May and August respectively; also to include Berlin in their route to and from Copenhagen, and to be governed by special instructions from the Surgeon-General in complying with this order. (S. O. 44, Par. 8, A. G. O. Feb. 21, 1884.)

Woodward, Joseph J., Major and Surgeon, leave of absence still further extended six months on account of sickness. (S. O. 44, Par. 11, A. G. O., Feb. 21, 1884.)

Horton, S. M., Major and Surgeon, having reported at these Headquarters from leave of absence, ordered to Fort Hays, Kansas, for duty. (S. O. 40, Par. 2, Hdqrs., Dept. Mo., Fort Leavenworth, Kan., Feb. 20, 1884.)

Patyki, Julius H., Captain and Assistant Surgeon, leave of absence extended for one year on Surgeon's certificate of disability, with permission to go beyond sea. (S. O. 43, Par. 9, A. G. O., Feb. 20, 1884.)

Maddox, T. J. C., First Lieutenant and Assistant Surgeon, assigned to temporary duty at Meyer's Springs, Texas. (Per Post Orders, No. 27, Par. 1, Fort Clark, Texas, Feb. 13, 1884.)

Dietz, Wm. D., First Lieutenant and Assistant Surgeon, assigned to temporary duty at U. S. Military Academy, West Point, N. Y.

Phillips, John L., First Lieutenant and Assistant Surgeon, assigned to temporary duty in Dept. of the East. Mearns, Edgar A., First Lieutenant and Assistant Surgeon, assigned to duty in Dept. of Arizona. Kneedler, Wm. L, First Lieutenant and Assistant Surgeon, assigned to duty in Dept. of Dak. Black, Charles S., First Lieutenant and Assistant Surgeon, assigned to duty in Dept. of Texas. (S. O. 46, Par. 1, A. G O, Feb. 25, 1884.)

Changes in the Medical Corps of the Navy for the Week Ending March 1, 1884.

Assistant Surgeon H. W. Whittaker, from the "Portsmouth," and on sick leave.

P. A. Surgeon E. H. Green, from Museum of Hygiene, and waiting orders.

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ORIGINAL ARTICLES.

RAPID LITHOTRITY OR LITHOLAPAXY, ITS LATER IMPROVEMENTS AND ITS PRESENT CONDITION.

BY EDMUND ANDREWS, M.D., LL.D., PROFESSOR OF CLINICAL SURGERY IN CHICAGO MEDICAL COLLEGE; SENIOR SURGEON OF MERCY HOSPITAL, ETC.

Lithotrity at one sitting, as planned and developed by Prof. Bigelow, has revolutionized the treatment of vesical calculus. Those most familiar with this method will agree with me that it is destined not only to supersede the slow lithotrity, but to abolish lithotomy itself in forty-nine fiftieths of the adult cases. I have now performed this operation eighteen times with only one death, though the patients averaged nearly sixty years of age, and the stones were mostly very large. In one of the successful cases the crushed fragments weighed two ounces and five drams, and the patient was about 70 years of age. No such success could have been obtained by cutting on such unpromising cases.

Passing by as irrelevant the unpleasant personal controversy between Prof. Bigelow and Sir Henry Thompson, a few words are proper respecting the newly coined word, litholapaxy. By the laws of literature, Prof. Bigelow is not entitled to inflict upon us a new technical term for a mere modification of an old operation, however valuable he may prove it; yet there are some special advantages in the new word, which will probably cause it to be permanently retained. The terms lithotomy and lithotrity by their close resemblence in sound, are an annoyance to every clinical lecturer, as well as to every one of their listeners.

Having frequently to be used in the same discourse they require a vexatious care in both speaker and pupil to prevent one word being mistaken for the other. Litholapaxy, on the contrary, is easily distinguished from lithotomy, and is moreover a smooth and agreeable word to speak, so that by its own merits it will doubtless cling to the new operation, while the old word will become obsolete with the old method.

Litholapaxy is from the Greek *lithos*, a stone, and *lapaxis*, evacuation. The latter word in Greek usage generally refers to evacuation of the bowels, but, like the corresponding English term is not necessarily limited to that meaning, and signifies evacuation of anything.

The first step towards this operation is of course an instrumental demonstration of the presence of a stone by the process of sounding. This operation, as performed with the old instruments, was sufficient to detect stones of ordinary size; but in cases of very small calculi, or in searching for the last minute fragments during the operation of litholapaxy a more delicate apparatus is required. To meet this necessity I devised in the year 1877 an attachment to the ordinary searcher, by which I was enabled to detect by the ear the smallest bit of calculous matter. The apparatus was shown to the Illinois State Medical Society in 1878, and figured and described in the Society's Transactions of the same year (p. 254). In the form there depicted the instrument consists of a light, hollow searcher, having a small rubber tube and ear piece attached. The searcher being introduced into the bladder, and the ear piece placed in the surgeon's ear, the slightest contact with sand or grit becomes distinctly audible. Having subsequently discovered that a solid searcher transmits the sound as well as a hollow one, I modified the plan and appended a small clamp screw to the rubber tube, by which I could attach it at pleasure to any metalic sound whatever.

Figure 1 shows the apparatus clamped to Sir Henry Thompson's searcher. I have one with two tubes attached for the purpose of increasing the intensity of sound by the binaural effect, as well as to assist clinical instruction by enabling two students to listen to the sound at once.

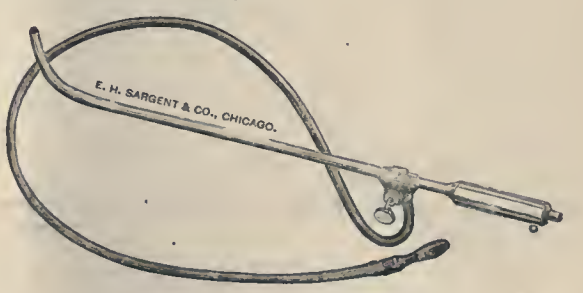

Fig. 1.—The author's Auditory Searcher.

A considerable period after this was published in the Transactions of the Illinois State Medical Society, the London *Lancet* described substantially the same device, naming it a lithophone, as a new invention

of an English surgeon, though it had been published here long before, and had been publicly used for years in Chicago clinics.

The scarch of the bladder, to be thorough, must be made with at least two forms of instruments, viz.: the ordinary searcher with a short beak, which can be rotated backward to explore the *cul-de-sac* behind the prostate, and the one with a very long beak to reach the front of the bladder near the pubis. I often clamp the tube to a simple britannia metal sound capable of being successively bent into several different curves as the case may require. Contrary to one's natural supposition, this soft metal conveys sound almost as well as steel. The auditory sounds are manufactured and sold by E. H. Sargent & Co., of Chicago, to whose enterprise and kindness I am indebted in the construction of many other new forms of apparatus made at my request.

I have practiced for some years another innovation, which I consider of still more importance, though I am unable to say whether I have any priority over others in that respect. I refer to the great value of using warm carbolized water during the whole operation of litholapaxy, both to distend the bladder during the crushing, and to wash out the fragments afterward. Carbolized water acts as a decided local anæsthetic, benumbing the nervous activity of the bladder, and seeming to me to greatly lessen the shock of prolonged operations; besides, it checks bleeding, and leaves the viscus in a thoroughly antiseptic condition, preventing the formation and the putrefaction of pus, and acting as a very powerful local antiphlogistic. I use it in the strength of about 1½ per cent., and am satisfied that it greatly lessens the danger of all operations in the bladder.

Prof. Bigelow demonstrated the fact that the bladder will tolerate with impunity much larger instruments than those heretofore used, and that the large lithotrites enable us to comminute the stone in a shorter time and with fewer movements than small lithotrites. This advantage is still further enhanced by employing very large wash tubes, which, letting out large fragments of stone, greatly diminish the amount of crushing required.

The beak of the new instrument of the usual size is shown in Fig. 2. Smaller ones are made, however, for special cases.

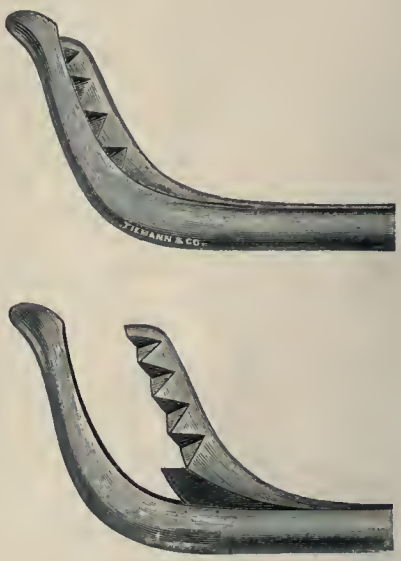

Fig. 2.—Jaws of Bigelow's Lithotrite.

The extra curve at the tip is made to facilitate the introduction through the prostatic portion of the urethra.

Fig. 3 shows the handle at one-half the actual diameter.

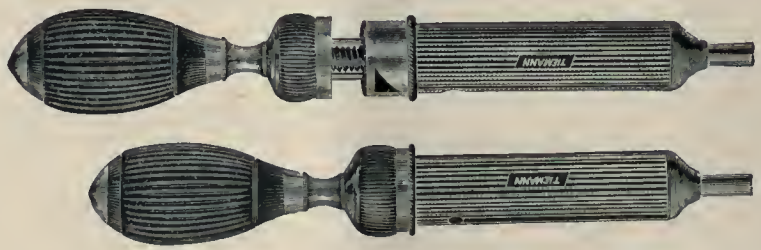

Fig. 3.—Handle of Bigelow's Lithotrite.

More important than his changes in the lithotrite are Prof. Bigelow's improvements in the evacuating instruments. This part of the apparatus was previously in such a wretched condition, that it had very little value, and many of the best lithotritists declined to use it, preferring to let the fragments of stone escape naturally with the urine. As before remarked, Prof. Bigelow greatly enlarged the evacuating catheters, some of them reaching No. 18 of the English, or 32 of the French scale, whereas the previous ones rarely exceeded 11 or 12 English, or 21 to 24 French. He also changed the form, making some straight and others curved, and all of them with a peculiar fenestrum, adapted to enter without scraping the urethra,

Fig. 4.—Beaks of Bigelow's Evacuating Catheters.

and yet to give exit to the largest possible fragments. Not every urethra will admit these great instruments, hence smaller ones must be kept at hand; but in the great majority of adult cases, they pass without difficulty, after slitting the meatus a trifle with a blunt-pointed bistoury.

The evolution of the "wash bottle," as Clover called it, or the "evacuator," in Bigelow's language, constitutes quite a history. Fig. 5 shows a French evacuator, of a complicated and inefficient sort. As it has no practical merits, it may be dismissed without description.

Fig. 5.— French Evacuator.

The apparatus of Sir Philip Crampton was simpler, but no better. It is shown in Fig. 6, and needs no special attention, as it is hopelessly obsolete.

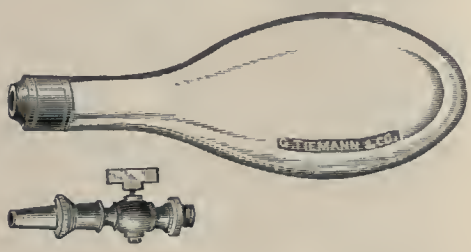

Fig. 6.—Sir Philip Crampton's Evacuator.

For a considerable time the standard evacuator was that of Mr. Clover, of London. His first one (Fig. 7) consisted of a pear-shaped rubber bulb attached to

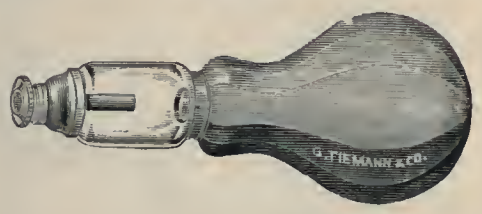

Fig. 7.—Clover's First Wash Bottle.

a glass bottle, into which a tube passed for half its length, to which tube catheters of the size of No. 12 English scale were attached. I found this apparatus very faulty, on account of the fact that a large portion of the fragments of stone drawn into the glass receiver would be swirled back again into the bladder at the next compression of the bulb. Moreover, the rubber was too weak for strong suction, and the cath-

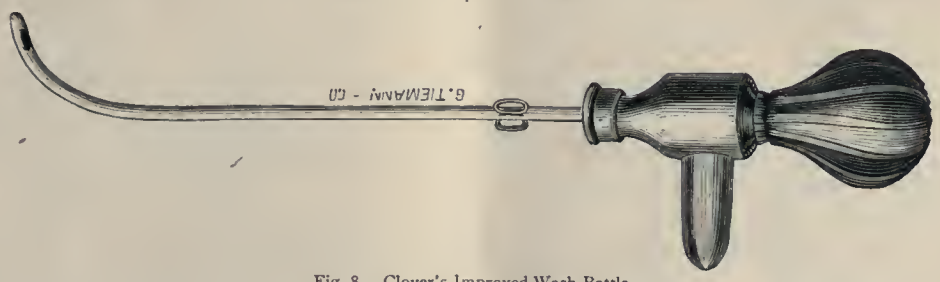

Fig. 8.—Clover's Improved Wash Bottle.

eters were too small. Clover's improved form aimed only to remedy the throwing back of fragments into the bladder. This he attempted by having a trap attached to the side of the glass receiver, into which the fragments might fall and be securely retained (Fig. 8). This plan was better, but still the catheters were too small, and the bulb too weak.

When Prof. Bigelow began to bring out improved evacuators, Sir Henry Thompson appears to have abandoned Clover's instrument, and to have made a series of improved forms, more or less in imitation of those of the Boston surgeon. His earliest one is shown in Fig. 9. F is a funnel for filling the bulb; C, the glass trap for fragments; D, a stop-cock; and B, the catheter. One of its merits was the shortness of the route from the bulb to the catheter, which left but little space for fragments to lodge half way out, where they would be again washed into the bladder. Thompson was soon dissatisfied with this, and produced another, shown in Fig. 10, having a larger trap, and a stop-cock to retain the fragments after they entered it.

Still further changes were now made by Sir Henry, and by Mr. Weiss, resulting in the form shown in Fig. 11.

In this apparatus the trap for fragments was removed from the base of the bulb and placed between the latter and the catheter. I have not used this form, but while it is evidently better than Clover's wash-bottle, the new position of the trap seems to me of doubtful value.

Bigelow saw at the outset the necessity of a better evacuator than Clover's, or any preceding one, and he set himself to the task of its production with such good purpose, that every form since devised, is either a mere modification of his, or at best strongly marked with his ideas. Fig. 12 is his earliest form.

1. is a strong rubber bulb, 2, a rubber tube, 3, 4 and 5 are the catheters, and 6 is the trap for fragments.

Fig. 13 represents a stand which received the glass trap, and held it upright whenever the surgeon wished to set it aside. I have used this evacuator consider-

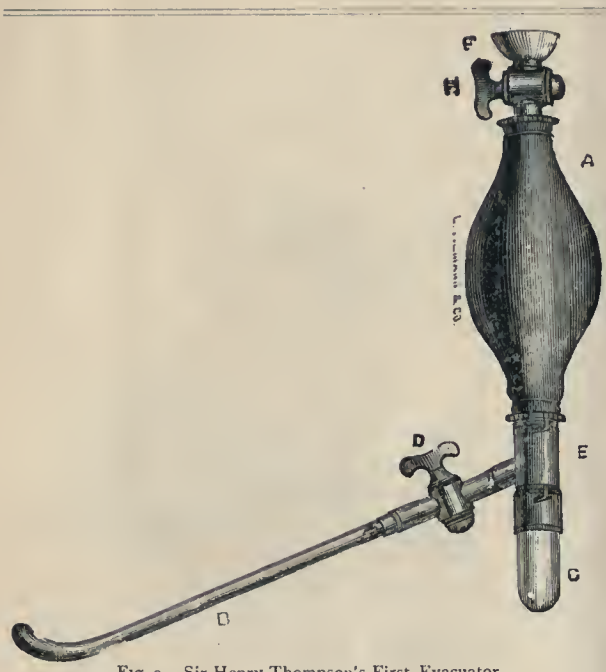

Fig. 9.—Sir Henry Thompson's First Evacuator

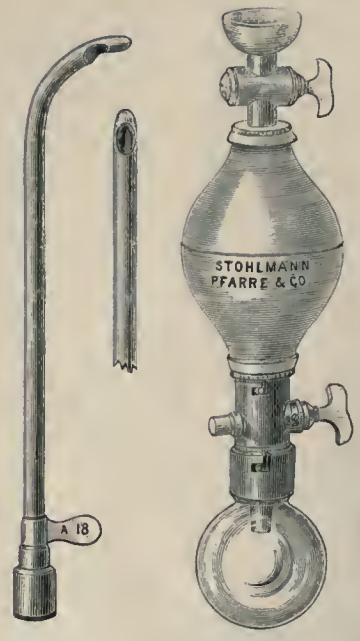

Fig. 10.—An Improved Form by Sir Henry Thompson.

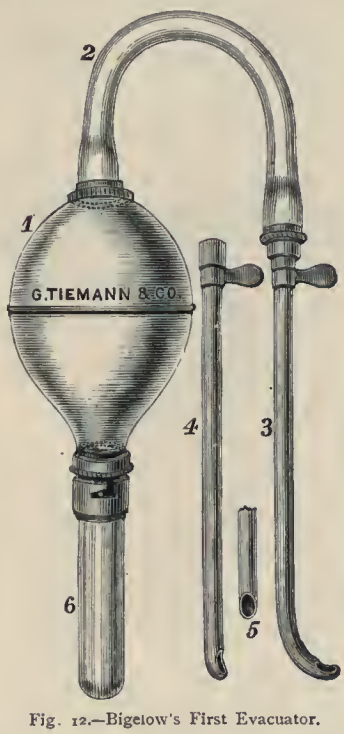

Fig. 12.—Bigelow's First Evacuator.

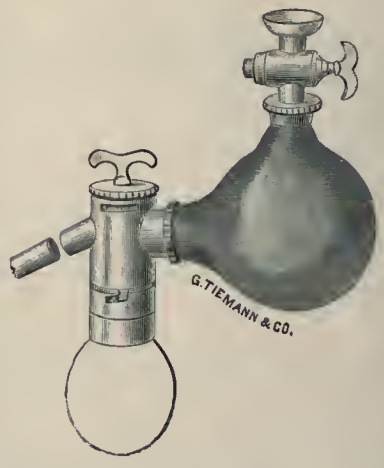

Fig. 11.—Evacuator as Improved by Sir Henry Thompson and by Weiss.

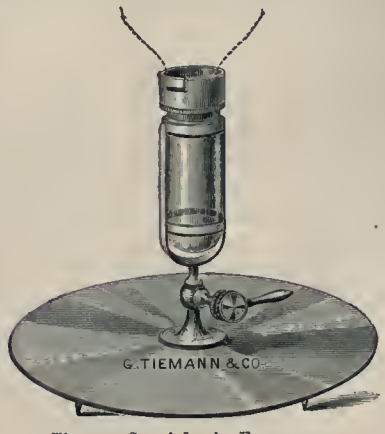

Fig. 13.—Stand for the Evacuator.

ably, and value it so much that I still keep it by me at all operations as a reserve, in case any accident should disable the one more commonly used by me. It had, however, two defects. In the first place the rubber tube, 2, is liable to become flattened a little by the curvature, or even decidedly kinked, so as to obstruct the passage of fragments. To prevent this, I have had the arch of the tube replaced by a metallic one of the same diameter, and only retain

an inch or two of rubber to make a flexible junction with the catheter. This makes a very effective instrument, but there still remains a defect. The longer the tube leading from the bulb to the bladder, the more fragments will remain in its bore, half drawn out, at the termination of each expansion of the bulb. All such fragments are driven in again at the next compression of the bulb. Hence it is better to have a shorter connection, and this led Bigelow, after some intervening efforts, to adopt the form shown in Figs. 14 and 15. In this plan the stopcock and tube enter the bulb obliquely below the middle. The tube is continued upward and inward to the middle of the bulb, and is there perforated in such a way as to arrest any swirling fragments which may approach it, but do not happen to strike into the very extremity of the tube. As there is always some blood in the bladder in this operation, the fibrinous clots very quickly catch in the perforations of the tube, so that in a few moments it is covered with them, and renders it no better than one not perforated. However, this seems scarcely to injure its action, and besides it can be unshipped and cleaned in

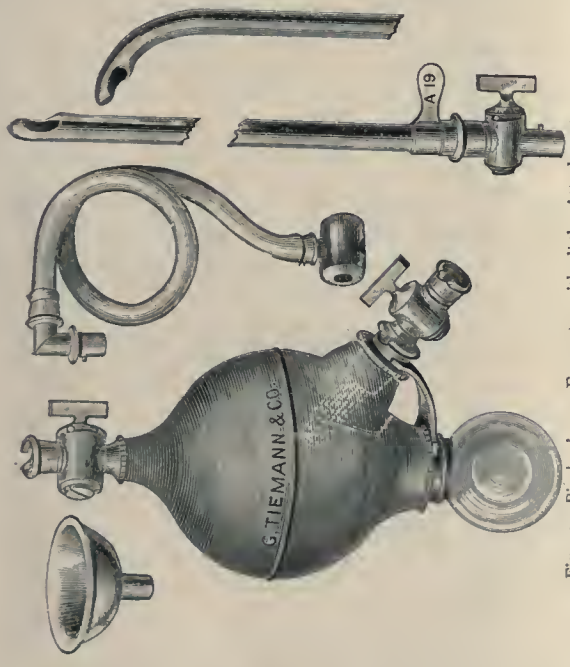

Fig. 15.—Bigelow's new Evacuator with all the Attachments.

a moment by an assistant. It is, perhaps, doubtful whether the perforations are of any use, for while they prevent some bits of stone from going back into the bladder, they render the suction current slower in the perforated part of the tube, and thus leave some fragments still in the tube at the end of the expansion of the bulb, and these pieces are of necessity at the next compression driven into the bladder again. The perforations, therefore, act both ways, and perhaps do as much harm as good. Sir Henry Thompson objects to them. On the whole this is a most excellent evacuator. It has an evil, however, that when filled it is heavy, and being fixed firmly in the catheter, it is more difficult to handle the latter delicately, so as to cause the minimum of irritation to the bladder, than when the catheter has a flexible connection. There has no way been yet devised to combine all the benefits, and at the same time exclude all the evils of stiff and of flexible connections.

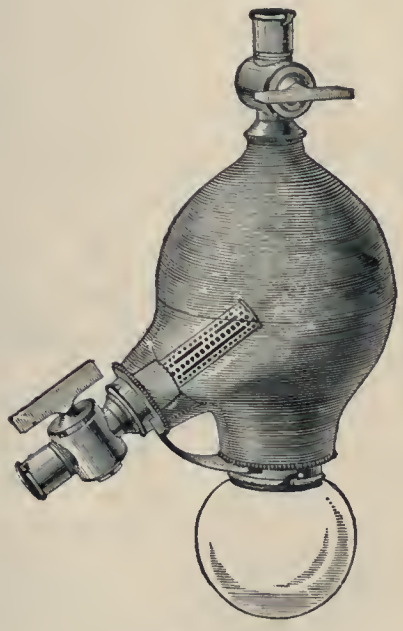

Fig. 14.—Bigelow's new Evacuator.

Much may be done by good management to diminish the throwing back of fragments into the bladder. These are mainly pieces left lying in the tubes when the current ceases at the close of each expansion of the bulb. It the surgeon commences his evacuating with the bladder nearly empty and the tube full of carbolized water, he will be able to press strongly and pass the water nearly all out of the bulb without injuriously distending the bladder. This gives a long suction, as the bulb expands again, and leaves fewer fragments in the tube than when numerous short, jerky compressions and expansions churn a little fluid to and fro in the catheter.

Prof. F. N. Otis, of New York, published in the *Medical Record*, of Nov. 3, 1883, a new form of evacuator, which is shown in Figs. 16 and 17.

I is the rubber bulb, intended to throw air instead of water. Through the rubber tube H it drives air along the metallic tube G into the top of the glass reservoir A. To the bottom of the reservoir is attached the trap F for retaining the fragments of stone. The reservoir A contains only three fluid ounces. From near its bottom the metallic tube B curves upward and outward, and is connected by a short rubber tube with the stop-cock and catheter C. To prepare it for use, Prof. Otis directs to invert the apparatus, take off the trap F, fill the bulb A with water, replace the trap, and then to return the evacuator to its regular position. As the trap holds an ounce and a half, it will now receive that amount from the glass reservoir, leaving only an ounce and a

half in the latter. The catheter being connected and inserted into the bladder, the rubber bulb is compressed by the hand, driving air through the tube H G into the top of the glass reservoir A. Here it presses down on the top of the water, forcing it to run through the tube B. and the catheter C, until the water in the reservoir sinks to the level of the inner end of tube B. Then the elastic bulb being allowed to expand, it sucks the air out of the glass reservoir A, and thus forces the water in the bladder to rush through the catheter and fill the vacuum sweeping the stony fragments along, and dropping them into the orifice of the trap F. There is, however, just here an apparent difficulty, which Prof. Otis' description does not explain. As before said, when the apparatus is filled, only three ounces of water are put in, and of this one-half runs into the trap, leaving only an ounce and a half in the glass reservoir A. Of this ounce and a half, nearly or quite half an ounce must lie below the inner orifice of the tube B, so that only an ounce can be driven into the bladder, and the same quantity drawn out again. Now, the catheter and tube C, if of full size, will hold a full ounce. It follows that the one ounce of suction provided for will simply draw up from the bladder about enough water and gravel to fill the catheter and connecting tube,

Fig. 16.—Prof. Otis' Evacuator in working position.

and then, the current ceasing, the fragments will remain where they are, until the next compression of the bulb drives them all down again into the bladder. After considerable experience with evacuators of several sorts, I am more and more impressed with the superiority of those which produce the largest currents of the longest possible continuance. The churning of a single ounce of water up and down the catheter would obviously be a total failure in its results. There must be something in the apparatus or

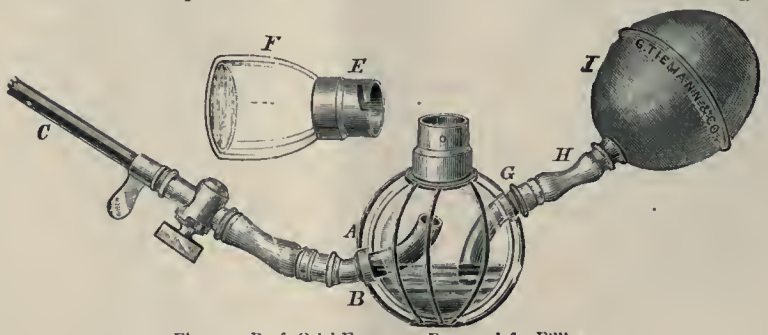

Fig. 17.—Prof. Otis' Evacuator Reversed for Filling.

in the method of using it, which the inventor has not explained in his article, or else it will disappoint his expectations.

Prof. Otis suggests that if one chooses he can dispense with the air in the bulb, and fill the whole machine with warm water. This seems to me a much better plan than the other, for it permits one to use the entire expansibility of the bulb I at each stroke, and thus, by producing currents of a longer duration, draw the fragments more thoroughly out of the catheter into the reservoir.

One of the agreeable surprises of litholapaxy is to note how little shock follows an operation of even an hour and a half duration, when performed in carbolized water. Generally the recovery of the patient is far more rapid, and the danger in adults far less than in lithotomy.

It is probable that in litholapaxy there is a little greater liability to leave behind minute fragments, than in lithotomy, but with the delicacy of search obtained by using the auditory sound, the difference is not great. After the first effects of the operation are over, the patient should be gently and repeatedly searched, and if any bits of calculus have remained, they are easily and quietly picked out in the presence of carbolized water, without much more disturbance than accompanies the passage of a catheter. For such purposes small instruments are always used, and there is no shock nor inflammation produced by these supplementary searches.

On the whole, it is safe to say that Prof. Bigelow's ideas have revolutionized the whole treatment of calculus in adults, leaving only a few peculiar cases proper for the use of the knife, but in children lithotomy will still be necessary in the majority of cases. Litholapaxy, however, is preferable even below puberty in a few cases, where the stone is quite small and the child is twelve or more years of age. In these cases of course smaller instruments must be used, but the danger of lithotomy before puberty is so slight that it leaves little need to desire any improvement in the methods of operating on young children.

No. 6 Sixteenth st., Chicago.

THE EFFECTS OF SANITATION UPON THE ORGANS OF VISION.

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It does not require the mind of a sage, nor the intellectual reasoning of a philosopher, to know that all effects have their causes; that disease is the cause of death, and that there is a cause for disease.

In speaking of the diseases of special organs from a sanitary platform, it is necessary first to make some general remarks. This becomes necessary especially when at least a part of those diseases are a secondary manifestation, due, however, to the same cause that produced the primary constitutional disturbance. Acting in this manner, the effect might become manifest through the system upon the kidneys, and afterward vision becomes impaired by the implication of the optic nerve and retina.

Medical science has made a grand march in the last decade. The unknown is becoming known. Many things that were buried in darkness and obscurity, now become visible when the light of science is concentrated upon them by means of the microscope. It has shown that epidemic, and even endemic and sporadic diseases, are produced frequently, if not generally, by some form of animalculæ. Then, this being the case, the question arises, What conditions are necessary for the production of these germs? If they can be discovered, then the next question is, Can they be destroyed or prevented from developing?

These questions bear the impression that it is more important to discover and remove the cause of disease, than it is to cure it after it has become manifest in the system.

Filth, in its various forms, is probably the chief factor in developing the germs of contagious diseases.

In decomposition of vegetable and animal matter, we have the effluvia arising from the decaying mass mingling with the oxygen of the air, which imparts vitality or life when submitted to the caloric rays of the sun, which rapidly converts it into carbonic acid gas, and in this is generated the germs. Their numbers are legion, and their size so small that, according to Zell, those contained in a single cup of putrid water would outnumber the population of the globe. These germs are transmitted from one place to another, either by the atmosphere or by fomites.

If the filth is located in cellars or subterranean passages, where there is no ventilation, then the effluvia arising from this process of putrescence, mingling with the confined atmosphere, produces the mephitic air which leaves disease and death in its wake.

The ancient Romans invoked the aid of this mephitic sibyl to ward off diseases, especially those of a malarious origin. But if the effluvia of decomposition gives birth to germs or poisonous gases, and they in turn produce disease, then it is evident that we will have to invoke the aid of antiseptics, disinfectants, germicides, and cleanliness.

It is not the intention of this article to speak of the general use or mode of applying these agents, except to a limited extent.

Ophthalmia neonatorum is frequently supposed to be due to a vaginal discharge existing at the time of the child's birth. This discharge may have been caused by contact with matter containing some of these germs. If so, then, as they multiply very rapidly, we will find large numbers of them in every drop of the purulent secretion. Some of this virus getting into the infant's eyes, will produce the disease. In order to prevent this, after the child's face has been carefully cleansed, the eyelids should be bathed with a solution of hydrarg. bichlor. gr. 1 to aqua oj., and a few drops allowed to pass into the eye. This, if properly used, will, in the majority of cases that have been exposed to this source of contagion, prevent the development of the disease.

Public hygiene in a country like this involves the enactment of certain laws, by means of which the safety of the community in general may be protected against the errors or the omissions of a few. It especially aims at the prevention of contagious or communicable diseases by the removal of avoidable causes. The people must be taught that a great many diseases can be avoided by resorting to the proper measures, and that knowing their duty and then neglecting to do it, they are responsible for the consequences.

Personal cleanliness and the avoidance of all excesses is the cardinal principal of health preservation.

Anything that would produce disease in one of the organs would, to that extent, be productive of inharmony. Anything that will prevent an organ from adding its portion to the general welfare of the system, interferes with the machinery of the economy. Not only that, but if an organ becomes diseased it not only does not add its *pro rata* for the maintenance of the system, but perverts the action of others. As the most perfect condition is produced by the united influence of all the organs acting in harmony, it is not only desirable that this state should be obtained, but maintained.

If the inhalation of the exhalations from decaying animal and vegetable material has a tendency to produce disease in any organ of the body, then it is detrimental to the system, and should, if possible, be prevented.

Filth, by accumulating upon the surface of the body, will prevent the normal function of the integument, and may be the cause of disease without pro-

ducing or developing microbes or animalculæ, but by compelling the system to retain mephitic products that should be cast off.

In tenement houses poverty and filth, apparently at least, go hand in hand. The children are unkempt and unwashed, and the exhalation from their bodies and clothes has a nauseating odor. The same delectable smell will sometimes greet the olfactories in every room of those buildings. Frequently this condition arises from carelessness and negligence.

We can conceive conditions where humanity is begrimed and saturated with dirt, and even filth, and not be able to remove or prevent it. Such a condition might exist especially in a prison.

But the ordinary dweller in a common tenement house has no excuse, but they are dirty and filthy, because they want to be so, or else they are unwilling or too indolent to test the efficacy of soap and water.

"As the twig is bent the tree is inclined," is an adage that is as old as the hills. As these tenement house children are reared in squalor and dirt, when they get older they do not depart from it, but follow in the footsteps of their parents. When an epidemic makes its appearance we find the largest number of cases and the greatest mortality in the filthy districts. Evidently then, there is a *something* in filth that invites disease, especially of the contagious epidemic form, to come in and take up its abode. I might also add that disease generally accepts the invitation.

In a given case a filthy neighborhood may be so poor that actual want of the necessities of life is an appreciable cause of disease. In another case the population may be so badly quartered in certain conditions, which by themselves would not be called unsanitary, yet may be so over-crowded in their apartments, or be living in such close-built houses, that this has to be taken as a cause that will produce disease.

A filthy neighborhood means an unsanitary condition; an unsanitary condition means a lowering of the powers of nature; a lowering of the powers of nature means less resistance against disease, and less resistance means a greater liability to contract any contagious malady.

This unsanitary depression not only places the system in the most favorable condition for the reception of the various diseases that wander around over the earth, but it engenders follicular hypertrophy of the conjunctiva. This condition may remain passive for an indefinite length of time, and may even disappear with favorable environments. But, as this is one of the products of a poor hygienic condition, it is not impropable to suppose that a large number of such persons are in this condition. As the fuel is already arranged, all that is necessary to have an outbreak of this disease is to apply the torch. Exposure, or a drop of a specific virus coming in contact with the conjunctiva of one of these eyes, will act as the torch to start the fires of inflammation that will spread from one person to another, until all that are susceptible will be attacked.

Children, under the same conditions, are even more liable to this disease than adults. This form of ophthalmia used to be the dread of armies, and the scourge of pauper schools, and houses of refuge.

It might be interesting to know whether the germs are transmitted from one person to another, and if so, if direct contact is absolutely neceessary.

The eye is an amphibious organ, part of the time immersed, so to speak, in a fluid, and then exposed to the atmosphere. Anything that will produce an irritation or inflammation of the conjunctiva not only increases the natural fluid secretion, but creates a new and abnormal one. This abnormal secretion is generally purulent in this form of ophthalmia. In this purulent discharge there are bacteria or germs. These are thrown into the atmosphere by evaporation from the eye-ball and lids, or by passing through the tear-channels into the nose, and are carried off during the acts of respiration. They then float around in the air, and if in ill-ventilated and poorly arranged apartments, they rapidly increase in number, so that it becomes an easy matter for some of them to come in contact with the eyes of other persons who may be present. If the eyes thus exposed have been prepared by the process already described, then the abundant crop of purulent ophthalmia will show that good seed was sown upon favorable soil.

Infants and children whose mothers have to leave home and work during the day, may suffer from disease simply from neglect and the want of proper management. An infant cannot take care of itself, and its natural tendency is to get dirty. If allowed to remain a sufficient length of time in this condition, the natural accumulation of foreign material upon the integrument not only weakens the powers of nature by closing up the avenues through which equilibrium of secretion and excretion is to be maintained, but it actually develops disease.

By closing the respiratory avenues of the skin, the system is compelled to retain mephitic products that should be cast off. These, by acting on the brain and nervous system, may produce a functional disturbance which will involve the accommodative apparatus. This may be followed by hypermetropia, and when the child gets old enough to use the eyes for regarding near objects, such as looking at letters, reading, etc., one eye will squint inwards, and as an ultimate result or effect, we have convergent strabismus or "cross-eyes."

Again, in filthy districts where the foul air which exists in alleys and streets can act with the greatest force on the inhabitants; such localities always show an increased mortality rate. The increase of mortality affects all ages, but especially the young. In a locality of this kind, if the ordinary diseases of childhood prevail, such as measles, scarlatina, etc., we find, first, that the mortality is increased, and, next, that the conjunctivitis of the former is more marked, the congestion greater, and more liable to produce inflammation or ulceration of the cornea. Chronic conjunctivitis or granulated eyelids are more apt to follow. In the latter class of cases, dullness of vision from uræmia, inflammation of the retina with a deposit of albumen, optic neuritic, and asthenopia, or a weak and irritable condition of the eyes, are among the consequences.

The organs of the body are better if they are exercised in a proper and judicious manner. Complete and continued idleness and relaxation begets disease. The eyes are no exception to this rule. Perfectly formed and normal eyes should perform their work without producing any unpleasant sensations. The best test is that we perform our work forgetting that we have organs of vision, This can very properly be taken as the guide by which to regulate the amount of work that they can perform. There is a very wide range in this respect, and what would not injure some eyes in the slightest degree, might produce fatal disease in others. Some who have good vision injure it by deliberate and rash usage, which is the result of over-confidence.

One person will say to another, "I have very strong eyes, and can look at the sun with them." He will demonstrate this to his companion by allowing the bright rays to pass directly into his eyes for a few seconds. However, he is liable to pay dearly for his experiment, as it is well known that a very bright light, whether it be direct from the sun, or the glare from a furnace, or reflected from snow, has a tendency to blunt the sensibility of the retina. Days, weeks, and months are sometimes required to restore a condition of impaired vision as the result of exposing the eyes to the direct rays of an intense light.

A Frenchman wrote a book with the title, "The Advantages of a Bad Constitution," in which he tried to prove that the tendency was to prolong life. There is at least reason in this seemingly rash statement, from the fact that having a delicate constitution, the owner would be very apt to banish all recklessness and excesses, and guard the already impaired body.

Many an old person who is blind might have preserved a fair amount of vision for the evening of their lives had they exercised the requisite care in the forenoon of their existence.

Distant vision in the normal eye is simply a sensation of passivity, while near vision means muscular exertion. If this is carried to the extent of producing fatigue or pain, then harm is likely to result, unless the proper amount of rest and relaxation are allowed for nature to, reproduce a normal condition. In reading, or studying, or writing, it is best to occasionally look across the room or out of the window, and in this manner rest the eyes by relaxing the muscular tension. When a person is in deep thought the eyes are either closed or passively turned toward some object, but not in action. In this condition all of the organs except the brain are at rest. Democritus, one of the founders of the "atomic theory," is represented as being so intense in his thinking, that he put out his eyes, that he might not be diverted in his meditations.

One of the disadvantages of living in a city is that the eyes are constantly used for near objects, necessitating a continual tension upon the muscles, hence a tendency to become fatigued.

A little girl that had been born and reared in the city, was taken to the country for the first time, and was almost bewildered, and exclaimed, "Oh, mamma, I never knew there was so much sky."

For an overstrained and weakened eye, simply from excessive tension on the muscles, before any permanent change in the refraction has been produced, there is probably nothing that gives more relief and at the same time is more soothing than looking at nature as she exists in the valleys, woodlands and hills. Especially is this true in the spring or summer, as the natural green has a very pleasant and agreeable effect on the organ of vision that has been fatigued and weakened by overwork.

It is scarcely necessary for me to say, that asthenopia is frequently developed on account of the poor quality of type that is often used. Cheap literature, quite frequently, means poor type; poor type means blurred and imperfect letters, and blurred and imperfect letters strain the accommodation, fatigue the eyes, producing congestion and functional derangement, and this in turn may be followed by inflammation and structural change, with permanent impairment of vision. Von Græfe stated, that unless the type was changed, that Germany would become a nation of blind people. Previous to his death he avoided, as much as possible, reading literature that was printed with German letters.

In addition to poor type, reading with poor illumination is another cause of disease of the eyes. As an example of the two combined, we might refer to the ambitious American youth, who has purchased a 10 cent novel, with an old gold back, and a new gold narrative. You will find him in the evening, doubled up in the corner, reading by the light of a little lamp with a smoked chimney. In this cramped and unnatural position he reads the history of the deeds of the daring desperado, Wild Fire Texas Jack, and his romantic encounters and escapades with a whole tribe of cosmopolitan Indians. During the time that he is thus storing his mind with useful knowledge, he may also be laying the foundation for a parental bill with the oculist.

Then, in addition to the foregoing, we might add that of position. If a person is lying down, or in a stooping position, or with the chin down upon the breast, it is evident that he has assumed a position that is favorable for producing congestion.

Persons, who are sleepy, sometimes make an effort to read when tired nature objects. Then, to accomplish their purpose, they place their will power against a natural law. At the same time that they may succeed in performing the self-imposed task, if often enough repeated, it will end in the production of asthenopia.

A very common error, and one which the majority of us have committed, and probably will again, is that of reading while traveling upon the cars. The constant jarring keeps the paper moving to and fro, and this requires a constant and continued contraction and relaxation of the muscles of accommodation, and the probabilities are that we know of the consequences by experience. The eyes soon become fatigued, necessitating a cessation of the strain placed upon them. In these cases, at first, all that is required is rest, nature rapidly overcoming the temporary derangement or functional disturbance. However, we may, by a continuation of the effort, change

this condition of functional disturbance into one of active congestion or inflammation, and find permanent impairment of vision as the ultimatum. This condition is generally developed gradually. The eyes at first do not appear to be unfavorably influenced, but after a while symptoms of weakness appear, so that in a very short space of time, after the effort to read has been made, there is an increased secretion of tears. This is rapidly followed by pain and blurred images. If a reasonable amount of rest does not relieve the eyes, supposing that there is no inflammation existing, an examination in the majority of cases will reveal an error of refraction. This refractive error may have been produced simply as the result of straining and abusing the organs of vision. In order to restore the impaired vision thus produced, so that the eyes can be used without producing pain, or becoming fatigued, the lens that represents the amount of error will have to be used.

"We are here to-day and *yonder* to-morrow" is trite, but true. This statement embodies our existence in this world. It signifies *change*. Life means change; it means motion, and motion means life. Nature has a few marks by means of which she designates this condition. In youth we have the rosy dimples and sparkling eye, but as decade after decade of time sweeps over the world, Nature touches the locks in the temporal region with the wand of senility, and the hair becomes white.

After we have passed the meridian and start down the declivity of life, there is a change takes place in the eye. Some of the organs lose their pristine activity, and become more sluggish in their action. There is a preponderance of the earthy over the animal matter. Senile changes take place, so that the eye that could read ordinary print with ease at a distance of twelve or fourteen inches, can now do so no longer. The paper has to be placed farther and farther away, until the distance becomes so great that the image of the object that is formed upon the retina is so small that the impression that it makes cannot be recognized distinctly. This condition means a receding of the near point of vision, and is called presbyopia. It begins at about the twelfth year, but is not sufficiently developed to need correction, as a rule, before the fortieth or the fiftieth year.

When the near point has receded beyond a given distance, then the effort to read and write produces a chain of unpleasant symptoms. In a few moments the eyes experience a burning or stinging sensation. The tears are secreted more freely; the smarting sensation gives place to actual pain; there is a congestion of the vessels, the eyes become watery and red, and a blurred image is formed. By resting the eyes a few moments, and gently pressing upon, or bathing them with cold water, all these symptoms pass away. They rapidly return when the eyes are again used.

This is the natural consequence that is produced when the refractive power is too low; when the focal point of the lens is greater than the distance from that organ to the fovea centralis of the retina.

This condition is easily corrected by using a suitable lens. A great many people will not use glasses even when the evidence is manifest that they are needed. They may imagine that it indicates that they are getting old, or that they do not look well with those frames before their eyes, or that it would not do to wear them in their line of business, etc.

Then, again, some say, I do not want to use glasses, for when I commence using them, then I will have to continue to do so. A common error is that it is better to do without glasses as long as possible.

When presbyopia has developed sufficiently to need correction, then the time has arrived to commence using glasses. By so doing the eyes will remain stronger and vision clearer than in any other way. By following this method, sharp, clear and distinct vision is preserved. On the other hand, by constantly straining and congesting the eyes in trying to read or work, without glasses, tends to produce inflammation and asthenopia. The eyes become weak, suffused with tears, and irritable. They cannot be used for any kind of fine work without becoming painful.

After they have been abused in this manner, it is sometimes very difficult to get a pair of lenses that will give satisfaction. The lens first required is generally much stronger for an eye that has been strained in this manner. They have to be changed more frequently, and do not give as good results.

It is evident, then, that there is nothing gained by trying to use a presbyopic eye for reading, writing, or any kind of fine work, without the proper glasses.

Vision for distant objects does not undergo a change in the normal presbyope. They use their glasses to read, then take them off and see as well in the distance as ever.

With the eye that has been excessively strained and congested in trying to look at near objects, we frequently find does not see well in the distance.

Then we will refer to our cardinal principle, and claim that it is as applicable to the eye as a special organ as to the body, and say that if we wish to preserve our vision we must avoid all excesses.

Then, again, there are certain agents, such as alcohol and tobacco, that have a tendency to produce an amblyopic condition. When they are the cause, the derangement is developed in an insidious manner. The external appearance of the eyes remains unchanged. There are no visible symptoms of inflammation, and generally no pain. There is a gradual reduction in the visual power. Objects are not distinct, but appear to be enveloped in smoke, and present a hazy appearance.

This condition creeps on so unsuspectingly, that it is generally well developed before much attention is given to it. Either of these agents alone may cause the trouble. The two combined are much more liable to do so.

If, in addition to any of the foregoing states, you add an unsanitary condition, you simply enhance the power of the disease.

Mens sana in corpore sano is an adage probably as old as medicine itself, yet it is not *in rerum natura* for the various organs of the body to remain in a normal condition when we are surrounded by a mephitic atmoshere, and inhaling lethal germs. And finally, may we be permitted to add, that morality does not

exist so much in a blind observance of 'isms and 'pathies, and vague creeds, as it does in submitting to the dictates of nature, and following the precepts of health.

A PLEA IN BEHALF OF A MEDICAL AID FUND.

BY FREDERICK HORNER, M.D., OF VIRGINIA.

In proof that an urgent necessity exists for an effort to provide for a Medical Aid Fund, it may be stated that for some years past the attention of the profession has been especially directed to this subject, and the facts connected with the origin and history of this movement may be briefly narrated.

The Massachusetts Medical Benevolent Society recently held its 25th anniversary, and celebrated it by a dinner. The object of the society, it was stated, is to give financial aid to widows and orphans of medical men. The funds amount to $20,000, and each beneficiary receives $80 per annum. The Mutual Benefit Association of the physicians of Kentucky, Illinois and Indiana, embracing within its fellowship hundreds of our medical brethren, was the next organization of the kind undertaken. Dr. David Keller is deserving all praise for the interest which he has manifested in this successful enterprise. In 1876, under the auspices of the Philadelphia County Medical Society, the third auxiliary Aid Society was founded, and has been nobly sustained by Professor H. H. Smith and Drs. Benj. Lee and W. R. D. Blackwood. Ere long this society is expected to have a handsome and permanent fund, the profits of which promise to secure a respectable sum for distribution to the families of deceased members.

Dr. Benj. Lee, of Philadelphia, in a late report, says concerning this Aid Society: "It has been formed for the pnrpose of providing against the recurrence among the members of the Philadelphia County Medical Society of those sad cases in which medical men, after lives devoted unselfishly to the cause of science, have died leaving their widows and orphans dependent on the cold charities of the outside world. Our efforts will be by the steady growth of the funds derived from gifts and legacies, as well as from annual dues, to save such families of deceased members from penury and distress."

The profession in the City of New York has also undertaken a like philanthropic work, and have established on a firm basis the New York Physicians' Mutual Aid Association. Dr. James Anderson is the founder of this Association, which furnishes pecuniary aid, also, to its sick members in special cases of need out of the interest of the permanent fund. Dr. M. Blumenthal, the President, in a late report, says: "The Association stands upon a sound and safe foundation, and since its organization $27,000 have been distributed among the families of deceased members." He adds, "The amount of comfort conferred and grief and sorrow assuaged by this sum, surely no figures or words can adequately express."

The committee on the formation of the Aid Society of Virginia, made its report to the State Medical Society, and urges, "while every consideration is given by physicians to promote the public weal and health, there can be no excuse any longer for them to ignore the claims of the impoverished families of deceased brethren, and the committee is unable to recognize an objection to a trial of an experiment to raise funds to be applied for the relief of the destitute within our own medical household, and of brethren who furnish no exception to the accidents, financial distress and ills referable to the chances of human life."

At the thirty-third annual session of the American Medical Association, held at St. Paul, Minn., June 6, 1882, Vice-President P. O. Hooper, in the course of his address, said "he would also call attention to the propriety of the Association organizing a relief society for the benefit of the families of physicians left in destitute circumstances, and he thought a scheme of operation might be the means of accomplishing much good, and remove an ever-present anxiety from the life of many a struggling brother."

Abroad, especially in England and on the continent of Europe, for centuries past, ample, liberal and prompt provision has been made for disabled physicians and their families. On the occasion of the writer's acquaintance with Professor Alexander C. Simpson, of Edinburgh, and Drs. Charles I. Hare and Adams, of London, these gentlemen informed him that there exist in their respective cities societies well endowed, and ensuring to the needy member the amount of £60 sterling per annum. The London *Lancet* for March 17, 1883, noticed the annual meeting of the society for relief of widows and orphans of medical men, which met in the rooms of the Royal Medical and Chirurgical Society, President, Sir Geo. Barrons, Bart.; Dr. Johnson, Vice-President, elected in place of Sir Thomas Watson, deceased; 18 new members enrolled, and 9 had died. Total, 370 out of 4,500 members belonging to the British Medical Association. Sixty widows and five orphans were on the books; £2,871 were distributed during 1882; expenses, £190; the receipts available for grants, £3,061. Regret was expressed that so few medical men avail themselves of the benefits of the society, which allows £80 per annum to each widow. The editor of the *Lancet*, commenting on the effort to raise a medical benevolent fund, says: "Dr. B. W. Richardson was the moving spirit of the 1866 experiment. It is proposed to get at least 200 new members, and to raise a subscription of two guineas a year by members under 30 years of age. After the expiration of the first year, £1 a week will be allowed for 26 weeks, and 10 shillings a week for another 26 weeks in case of total disability to work. The President, Sir George Barrons, subscribed 10 guineas toward the fund. An additional medical sick fund has been raised in England, by which a physician when totally disabled receives sufficient sick pay to keep him going. It is proposed by this society that each medical man shall subscribe to this fund £2 2 shillings annually, and in case of illness from disease or accident he will, during his incapacity from attending to his professional duties, receive £10 a week. The *Lancet* also notices the annual meeting of the Central Society of the medical men of France.

This society is intended "not only to occupy itself, it is stated, in the general interests of the profession, but to afford succor to needy members and to their widows and children who may be left without any provision." According to the reports that were read and the speeches that were made, this society in Paris is in a most flourishing state, but at the same time the melancholy fact came out that, notwithstanding the revenue so justly acquired by some of the members of the profession in France, many of them live and die in almost abject poverty.

The *British Medical Journal*, holding the relation to the British Medical Association that the JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION does to the Association in America, has strongly advocated the establishment of a Medical Benefit Society. A contributor to our JOURNAL, who resides in Washington City, in a late article says: "There is great need for such a society, every practitioner will readily acknowledge; and while we see insurance companies and aid societies working successfully for special purposes, it would be the part of wisdom, if not policy, for physicians to imitate such examples, and the American Medical Association, as it stands to-day, could best foster and ensure a widespread support and sphere of usefulness to such a project."

With the facts above presented, no one can fail to admit that both in the United States and abroad medical aid societies are not novelties, and need only further development to embrace the whole profession, and especially in the rural districts, where too often a meager support is obtained by practice for the maintenance of the families of physicians. In the country, indeed, the majority of medical gentlemen neglect, or are unable to incur the expense of, the insurance of their lives; while this class located in large and metropolitan cities, more fortunate, realize usually handsome incomes, and hold professorships, and do provide for their families. An aid society conducted by ourselves would meet the wants, at least, of all who will avail themselves of its advantages. Army and naval officers may not be directly interested, because of the pension which a liberal government dispenses to their families. Yet even these classes have lately sought to provide a larger fund to meet this want. As additional evidence that this scheme for the creation of a medical aid fund has the support of the most eminent and philanthropic members of our profession, the writer will venture to take the liberty to quote from their letters on the subject. The late Dr. John Hodgin, ex-President of the American Medical Association, says: "I shall at all times and on all occasions be pleased to do anything in my power to aid the widows and orphans of deceased members of our profession." Prof. Lewis Sayre says: "It is a noble object, and deserves the favorable consideration of every man in the profession. The plan has worked admirably in this city, and would be very good to model after." Prof. Nathan S. Davis says: "The object in view is a good one. Many years since I advocated such a plan, and bestowed upon the matter some thought."

Dr. Wendle, of Murfreesboro, Tenn., writes: "Right here in this town we have an instance of an excellent physician who, after forty years' practice, died, and his children are left penniless, and his widow's home was sold last week." Dr. Blackwood says: "In Philadelphia we are fully in accord with the effort to establish both a State and National Medical Aid Society. It only requires concentration to get the matter under way." Dr. G. B. Thornton, President of the Board of Health of Memphis, writes, "that subsequent to the fatal epidemic yellow fever in that city, had not the noble and generous physicians of the city of New York sent us money, many families of the twenty doctors who died here would have suffered deplorable want." Dr. James Anderson, Secretary of the New York Aid Society, says: "Our association has been a great comfort to many a widow, yea, and four of its members, one a professor and one who once drove two horses. Our permanent fund we seek to keep intact, and it has proved the salvation of our association." With these quotations, which might be multiplied well nigh *ad infinitum*, a brief opinion of the distinguished President of the American Medical Association, Dr. Austin Flint, Sr., may be added. He says: "There can be no objection to a plan for raising a medical aid fund, to be brought before the Association at its session in Washington city in May, and I sympathize in the benevolent purpose which is proposed."

Now, in conclusion, with reference to a plan to ensure its success, the best talent, the best business and most large-hearted men of the profession of the State and National Association, should be solicited to give their moral support and coöperation to such an undertaking. Various methods might be mentioned, all of which have been tested by the Aid Societies of Massachusetts, Pennsylvania, New York, and Kentucky successfully, and have proved to be cheaper, more secure, and more permanent than is accomplished by ordinary insurance companies. For example, let $1 be added to the annual assessment of the Fellows of the Association; a committee appointed by the President of five or seven members, who shall be authorized to prepare a constitution and by-laws, and shall hold in trust the fund, and when the amount is sufficiently large, a board of directors or a Section of benevolence on the death of a member shall determine the sum to be distributed to the individual. The Mutual Benefit Association of Physicians of Kentucky is managed by an able directory and by a finance committee, the members of which have gained the confidence of the profession and of the community.

The payment of $10 for membership and a $2 annual assessment secures to the family of a deceased brother $2,500, and to one sick $5 per week for serious illness or accident. The New York Mutual Aid Association requires the treasurer to deposit all monies received from assessments in a Trust Company, and when of sufficient amount, the accruing interest to be transferred to a savings bank to the credit of the Permanent Fund, which shall be created by contributions, donations, bequests, and all other monies not appropriated. As soon as the Permanent Fund shall amount to the sum of $10,000, aid may be rendered to the widow of a deceased member and his children

under 14 years of age out of the proceeds of said fund. The Medical Aid Society of Philadelphia allows $50 per annum to the widow, and also makes provision for the children until they become of age. The graded system may also be recommended, viz.: to have payments by assessment according to the relative age of the individual member, allowing such to be confined to three distinct classes, and assessments respectively of one, two and five dollars. The investment of all funds raised for this purpose in Government, or State bonds, or in a safe bank would be desirable.

Finally, is it not wiser for physicians to endeavor to raise a Medical Aid Fund, and thereby confer a blessing on the members of their own household than to commit such a fund to corporations which tax the policy-holder, and after all may fail; agents and officials of such corporations too often, as can be shown, appropriating the larger amount of the profits. At least recent statistics show that in 1861 thirty-six insurance companies existed in New York, and in 1881 only four of these companies were in existence. Let physicians be their own policy directors. This appeal is now made to the hundreds of humane physicians of the United States, who bear the mantle of the Good Physician. He failed not even on the cross to provide for the needy. During the present era members of the Masonic Order, of the several Christian churches, and even railroad operatives, have created a sustentation fund for the benefit of the sick and disabled. The younger members of the medical profession should not fail to apprehend the advantages of a like provision for themselves, their families, and medical brethren. Nor should it be considered utopian or premature, when the testimony of prominent physicians, and various medical communities have decided the question to be a *practical* and *urgent* one. With many it is a matter of surprise that during the long and eventful career of the American Medical Association, whose fellows are possessed of wealth and influence, and even shape for good the legislation of the country, and have annually conferred upon methods for the relief of mankind, and yet have failed to devise any plan of a benevolent character for the relief and support of their medical brethren. In the words of the gifted Atlee: "Our profession should ever seek along with the advancement of medical lore, to promote every system of benevolence and humanity." As was asserted on the occasion of a late meeting of the American Sanitary Association by Gen. John Eaton: "The legislatures of the several States of our Union leave no doubt that every child among us inherits the right to an education, the right to proper food, clothing, and shelter." Will physicians in this land longer practically deny these rights to the families of their brethren? among whom, it may be declared with truth, are scores of talented youths only requiring a small help, and destined it may be in future years to rival in fame such men as Livingstone, Kane, and Barnado, and may have reared to them in the hearts of a grateful posterity.

"Monumentum dere perennius
Regalique situ pyramidum altius."

MEDICAL PROGRESS.

ANATOMY AND PHYSIOLOGY.

The Sounds of Deglutition.—The Berlin Medical Society has recently sustained an interesting discussion on this subject, which was brought before them by Dr. Ewald. He recalls the physiological statement that deglutition is divided into two distinct periods, the first being that in which, by the aid of the muscles of the base of the tongue superior constrictors of the pharnyx, mylo-hyoid, etc., the alimentary bolus is projected along the œsophogus to the cardiac orifice in less than one-tenth of a second; the second at the end of an appreciable time, consists of peristaltic movements of the œsophagus, which by degrees detaches the alimentary substances from the walls of the tube and expresses them into the cavity of the stomach through the cardiac orifice.

If the ear is applied over the stomach in the left hypochondrium, or at the xiphoid cartilage, two sounds are heard which correspond to these two periods just described. The first sound recalls that of water falling into a bottle, and corresponds to the projection of the liquid into the œsophageal space; the second is of the same character, but a coarser sound, like the *glou-glou* sound of fluids. This is produced by the liquid forcibly driven by the lower segment of the œsophagus through the cardiac orifice into the stomach.

The first sound is less constant than the second, is more marked in those who vomit easily when coughing, and constitutes a sign of weakness. In twelve cases of syphilis, the first sound was very well marked, leading to the supposition that the *cardia* was altered by the disease. Thus far these are the views of Meltzer. With regard to the cause of the second sound, Meltzer considers its presence to indicate a normal closure of the cardiac orifice, but Ewald notes that this second sound is not constant in its relations to the first as regards the time of its occurrence, and is simply the result of the peristaltic contractions of the stomach.

Ewald, after examining 500 cases of different diseases, considers that these sounds are very variable, both in health and in disease, and that they cannot be made of diagnostic value.

Fraenkel, by employing the American stethoscope, and placing the finger on the thyroid body to obtain an exact appreciation of the phenomena, supports Meltzer's theory thoroughly, and also determines the marked prominence of the first sound in cases of constitutional syphilis. In cases of paralysis of the œsophagus the second sound was constantly wanting.

Sublinski examined a large number of cases. In 40 out of 100 he could not get the first sound when he auscultated the stomach or the inferior segment of the œsophagus. He had examinied more than 60 syphilitics, and frequently established the two sounds. But the first was frequently absent as in healthy persons. This method promises little in diseases of the œsophagus, and the use of the sound and other means of differential diagnosis will always be required.

Eulenburg had observed these phenomena in a number of cases affected with nervous affections. In one case of progressive bulbar paralysis the first sound was frequently wanting, and the second was reinforced in a marked manner and the interval markedly lengthened to 9.20 seconds. In several cases of diphtheria and of amyotrophic paralysis the sounds were found to be normal.—*Gazette Hebdomadaire de Médicine et de Chirurgie.*

MATERIA MEDICA AND THERAPEUTICS.

DR. HASSALL'S INHALATION CHAMBER.—Dr. Arthur Hassall has an article in the *Lancet* entitled "My Inhalation Chamber," in which he describes a room at San Remo which has a cubic capacity of 1,170 feet, one door, one window, no fire-place, no chimney. The walls are washable, the floor tiled. It is warmed by a little hot air admitted through a grating in the center of the floor, from a calorifére placed in the basement of the house, the temperature being usually 68° F. The chief apparatus contained in the chamber consists of two chamber inhalers. No. 1, a portable arrangement of five layers of cotton fabric, is suspended from the ceiling some feet above the grating in the floor, and can be raised or lowered. This apparatus is charged with carbolic acid, 1,200 grains being the medium amount; he calculates that this will be vaporized at the rate of 100 grains per hour, under suitable conditions. The time of inhalation, commencing at first with half an hour, has varied from one to two hours daily. The amount actually inhaled is an indefinite quantity, modified by the chest capacity, the loss of material by escape through the crevices around the window and at the door, and the sensible deposition of carbolic acid on the walls of the chamber itself. Although mention is made of carbolic acid alone, a variety of disinfectants, stimulants, antispasmodics and sedatives can be used.

CHRYSOPHANIC ACID ADMINISTERED BY THE MOUTH AND HYPODERMICALLY IN THE TREATMENT OF SKIN DISEASES.—Dr. Stocquart, of Brussels, gives in the *Annales de Dermatologie et de Syphiligraphié* his experience with this drug in 61 cases of skin disease, viz.: Acne, 3; ecthyma, 5; eczema, 32; impetigo, 4; lichen, 4; pityriasis, 1; prurigo, 4; psoriasis, 5; urticaria, 3. In none of these cases was there any local treatment, even of the most simple kind; 56 were complete cures, 2 incomplete, 2 were cures with relapse, and 1 resisted all treatment, being a case of inveterate papular acne. The cases of acne, ecthyma and impetigo rapidly yielded to treatment, as also the cases of pityriasis and urticaria. In the cases of lichen and of prurigo the itching disappeared rapidly, and in the lichen cases before the eruption had completely disappeared. In one case of prurigo, however, the cure was slow, and only after continued large doses. In the 32 cases of eczema, 30 were complete cures. One case of chronic eczema of seven years' standing was not completely cured, and another of twelve years' standing, after being relieved, recurred and was again relieved. In the 5 cases of psoriasis there were 3 cures, 1 relieved, with relapse, and again relieved, and 1 which was markedly benefited.

The mode of administration of the drug was generally as a potion, mixed with water. In ordinary doses this is not disagreeable. In large doses of 20 to 30 centigrammes it forms a magma with the vehicle which is not pleasant to take. The dose for a child is 1 centigramme per day; for an adult 3 centigrammes per day. There are exceptions to this rule. In doses but little greater, symptoms of intolerance and gastro-intestinal irritation show themselves, with palpitation of the heart, vertigo, and cold rigors, followed by flushes of heat. In an adult case of eczema a dose of 2 centigrammes produced nausea, vomiting, and abundant stools, which lasted for three days. In a case of acne it required 8 centigrammes to produce nausea, and 10 centigrammes to cause vomiting and abundant stools. It does not seem to be necessary or desirable to progressively increase the dose, and children tolerate the drug with great facility.

The hypodermic use of this drug was made in 11 cases, viz.: Acne rosacea, 1; eczema, 3; lichen, 4; prurigo, 1; psoriasis, 1; urticaria, 1. It proved to be quite as efficacious when used in this way, and more rapid in its effects. Out of the 11 cases there were 9 cures, 1 amelioration of a case of acne rosacea, and 1 unaffected stubborn case of chronic eczema. The prurigo was cured in two days; the other affections in four days, except one case of chronic eczema, which took fifteen days for its relief. In four cases a single injection was all that was necessary; in the others only two injections were used. The injection is not painful, but there is a tendency to the formation of abscesses, with severe pain, even in doses of 1 milligramme in a gramme of water, which limits this mode of using it to an absolute necessity.

USE OF A SOLUTION OF CHLORAL AS A DISINFECTANT AND AS A TOPICAL APPLICATION IN WOUNDS OF THE MOUTH.—M. Perier, of the Hopital Saint Antoine, Paris, has for several years (*Journal de Méd. et de Chirurgie*) employed constantly an aqueous solution of chloral to combat buccal inflammations or to prevent the accidents which are consecutive to traumatic injuries affecting the mouth. He formerly used alcoholized water, but gave it up, as in order to have a sufficiently powerful action upon wounds, the water should contain a very large proportion of alcohol, which makes it more irritating than the solution of chloral. The latter, besides, possesses a true sedative property. If a superficial or deep wound, caused by accident or by surgical means, communicates with the cavity of the mouth, M. Perier prescribes washings and rinsings every two hours at least. Besides which a careful washing is insisted upon after each ingestion of solid or liquid food, as it is necessary to prevent putrescible material from remaining in contact with the denuded surface. If the wound is anfractuous an irrigator is used, with care not to apply any pressure. Several instances are cited to show the value of this mode of application, where after considerable loss of substance autoplasty has been facilitated and produced excellent results.

The buccal inflammation which accompanies the development of the wisdom teeth is greatly relieved by the washings and gargles with the solution of chloral. In the case of peripheral depots of pus for necroses which open at the same time on the skin and in the mouth, the washings and injections through the fistulæ diminish the inflammation and pain rapidly, and suppress the horrible odor which accompanies this species of suppuration. The irrigation is especially insisted upon after the patient has taken milk or bouillon. These two liquids are ordinarily considered to be inoffensive, but, on the contrary, the residue which they leave behind them is precisely that which is most favorable to rapid putrefaction.

M. Perier uses chloral also in other cases. It is very convenient in inflammations of the fingers and of the hand. He uses baths and compresses soaked in the chloral solution. The strength used in all is 1 part chloral to 100 of water. The compresses are made of one thickness of prepared cotton placed between two folds of tarlatan, over which is laid an impermeable rubber cloth to preserve the humidity as long as possible; the dressings being changed very seldom.

MEDICINE.

Albuminuria in Typhoid Fever.—Dr. Johannes Mygge (*Nordiskt Mediciniskt Arkiv.*) gives the result of his examination of 217 cases of typhoid fever in the hospital at Copenhagen. In a third of these cases the urine was examined every two or three days, until death or convalescence. The examination for albumen was made simultaneously by heat and nitric acid (reaction of Heller). He arrived at the following conclusions: .

1. In fifty-two (out of seventy-two) of these patients, the urine contained an appreciable quantity of albumen; in nine there was but a trace; and in eleven the result was negative.

2. The albuminuria appeared ordinarily before the end of the second week of the disease; in three cases it was present on the fourth day.

3. The albuminuria was transitory (one to three days) in sixteen cases; in thirty-six it continued for from five to eighteen days, except in several lethal cases, where it was not observed for more than two or three days; and in some other cases where it was in relation with cystitis or cysto-pyelitis, and continued for 110 days.

4. Of the twenty-six patients suffering from a considerable and persistent albuminuria, ten died, while of the remaining forty-six none died.

5. Chronic Bright's disease, as a sequence to typhoid fever, was not noted in any of the 217 patients.

6. Of the patients affected with albuminuria, more than half suffered from nephritis, as shown by the objective and subjective symptoms furnished by the urinary passages; in the greater part of those remaining the albuminuria was principally a symptom of a cystitis or cysto-pyelitis.

7. Of the eighteen patients giving evident clinical symptoms of a renal affection, ten died and eight were cured. The symptomatology in these cases did not present the characteristic clinical appearance which, according to Amat and others, constitutes the renal form of typhoid fever, although in two of the patients the symptoms of the renal affection were so marked as to mask the principal disease.

8. The excretion of urea did not diminish in a constant ratio, but the variations observed so frequently in the lethal cases could not be attributed to the accumulation of urea in the blood.

9. It would appear from the observations of other authors taken with these, that an organic renal affection and not a functional derangement, is generally the cause of albuminuria, and that this affection is most generally a parenchymatous nephritis, but that it produces from time to time an alteration in the cellular matrix.

10. When there are evident symptoms of nephritis present, the treatment requires great care in giving cold baths. The baths to commence with, should generally be of a temperature from 79° to 75,° and descend gradually to baths of a temperature of 68.° As strong doses of quinine sometimes produce a collapse, this agent must also be administered with caution.

A Case of Actinomycosis.—Mr. W. Knight Treves, in the *Lancet*, gives the first description of a case of this disease in the country. It occurred in a man 45 years of age, a brick burner, aud apparently suffering from a scrofulous affection of the glands of the neck. His illness began 16 months before his admission with inflammation about the neck and angle of the jaw. A lump by the angle of the jaw which followed the inflammation, was incised. Subsequently, other swellings formed. When first seen he was in fair general health and well nourished. Over the angle of the jaw and in the posterior triangle of the neck, were three ulcerated and fungating surfaces, those by the angle of the jaw being about one inch, and that in the posterior triangle about two inches in diameter. There were tumors over the collar bone, the second rib and the fourth costal cartilage near the sternum, each of which was in a direct line, and had followed in regular order the one described as existing in the posterior triangle. These tumors resemble each other in appearance. They are smooth and evenly formed, and are in shape as nearly as possible half a sphere; the upper one is two inches in diameter, the lower one an inch, and the middle one intermediate in size. They have an elastic, semi-fluctuating feel; the skin over the upper one is thin, red, and evidently about to give way; the skin of the middle one is also discolored, that of the lowest is normal. To the right and left of these tumors are two nodules about the size of a marble, apparently the same thing in process of formation. The discharge was thin and serous, and contained minute yellowish masses, and disintegrated tissues, and had a peculiar offensive and sour smell. These tumors broke down in the course of four

months with gradual loss of strength, and formation of lumps on the other side of the neck and in the axilla. Not being like scrofula or any familiar form of new growth, the diagnosis of actinomycosis was made, which was confirmed by the discovery, under the microscope, of bodies which resemble the fungus peculiar to this disease.

OPHTHALMOLOGY AND OTOLOGY.

INFLUENCE OF THE SEXUAL ORGANS ON THE EYE.—Dr. C. E. Fitzgerald, of Dublin, in the last volume of *Transactions of the Ophthalmological Society of the United Kingdom*, records briefly five cases in which he establishes a distinct relation between disorders of the sexual organs and a diseased condition of the eyes. His first case was one of suppression of the menses, followed by an intense neuro-retinitis, with rapid recovery on the reappearance of the menses. The second was that of a case of disseminated choroiditis, with floating opacities in the vitreous. The menses were very excessive, and she was found to have multiple fibroid tumors of the uterus. The third was a case that at first presented only a slight haziness of one of the optic discs and pallor of both. The impairment of vision was very considerable, and there was a remarkable dilatation of both pupils, though they responded to the action of light; gradually, but steadily, the vision began to deteriorate, and atrophy of both optic nerves declared itself. Examination by a gynæcologist resulted in evidences of masturbation, which she admitted having practised for two years. Complete atrophy of both optic nerves subsequently ensued. The fourth case developed asthenopic symptoms, with a hyperæmic disk and marginal haziness. Masturbation was also diagnosticated in this case. The connection between the two showing itself curiously, a rather powerful caustic was applied to the vagina, making it very tender, and during this time (for some days) there was a marked improvement in the eyesight. This patient had also enlargement of the uterus and left ovary. The fifth case is simply referred to without any details, except that it is one of masturbation and suffering from marked neurasthenia.

INFLUENCE OF THE SEXUAL ORGANS ON THE EAR.—In the *Monatsschrift für Ohrenheilkunde* is an article by Weber Siel on this subject. The affections of the sexual organs of the female, and even the physiological accomplishment of their principal functions produce a marked effect on diseases of the ear. When pregnancy, flexions of the uterus, etc., occur in the course of ear disease, the progress and character of the latter are markedly modified. A simple catarrhal otitis, which is often insignificant, may become complicated with considerable disturbance of the nervous and circulatory systems, and the treatment of the ear disease becomes useless as long as the abnormal condition of the reproductive organs is maintained. When that is relieved, the affection of the ear is healed in turn, and frequently without treatment.

When an aggravation of deafness and of morbid sounds appear to be connected with a peculiar condition of the genital organs, then, and then only, the application of electricity will cause marked pain at the last dorsal and first lumbar vertebræ, when the sponge, covering the electrode, is there applied to complete a circuit in which the other pole is introduced in the Eustachian tube, so as to reach or pass its isthmus. This effect is constant and shows itself even with a feeble continued current of 5 to 8 small elements of Leclanché. One peculiar fact is noticed in this connection; and that is, whilst this pain increases in proportion to the prolonging of the contact of the electrode, the buzzing, vertigo, and other disturbances of the ear disappear completely, or diminish very markedly. In cases that are not of too long standing, audition returns almost to the normal state, and the amelioration of all the symptoms continues for several hours. In one case, where hearing had been difficult for a year past, and attributed to a diphtheritic affection, the continued moderate buzzing in the ears became extremely intensified with painful menstruation and ovarian hyperæsthesia. The deafness was correspondingly increased, and the patient suffered from vibratory shocks to the tympanum. Among all the means employed to relieve this condition only one was beneficial, that of putting ice over the region of the diseased ovary.

The influence of sexual excitement upon diseases of the ear is particularly manifested in cases of onanism. In the case of a young man suffering from chronic otitis, with a purulent discharge, perforation of the tympanum and intratympanic granulations, who was otherwise in perfect health, the ear affection became almost entirely relieved, when suddenly the symptoms became aggravated, and the remedies were of no benefit; the change in the general condition awakened a suspicion of masturbation, which was acknowledged, and on its being stopped an amelioration in the symptoms took place.—*Annales des maladies del'oreille. Jour. de Mèd. et de Chirurgie.*

THE DIAGNOSTIC VALUE OF THE BACILLUS TUBERCULOSIS.—Dr. Austin Flint, at a meeting of the New York Medical and Surgical Society, stated that he had made this question a subject of clinical study; and, so far as his experience had gone, it confirms the value of the presence of the bacilli in the sputa as positive proof of phthisis, their absence being of more or less value iu the exclusion of that disease, and the importance of their comparative abundance and scarcity as bearing on the question as to whether the disease was or was not actively progressing.—*Maryland Medical Journal.*

SANITARY COUNCIL OF THE MISSISSIPPI VALLEY.—The sixth annual meeting of this organization will be held in the city of Memphis, Tenn., on Friday, March 21, 1884.

PROFESSOR JOHN C. DALTON has been elected President of the College of Physicians and Surgeons of New York.

THE

Journal of American Medical Association.

PUBLISHED WEEKLY.

THE EDITOR of this JOURNAL would be glad to receive any items of general interest in regard to local events, or matters that it is desirable to call to the attention of the profession. Letters written for publication or containing items of information, should be accompanied by the writer's full name and address, although not necessarily to be published. All communications in regard to editorial work should be addressed to the Editor.

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CHICAGO, ILLINOIS.

SATURDAY, MARCH 15, 1884.

THE AMERICAN MEDICAL ASSOCIATION.—Less than two months remain before the time of the next annual meeting of our national medical organization, and the inquiry arises how far all the parties interested have completed whatever work they had intended for that occasion? That the local Committee of Arrangements have their plans matured, and all needful preparations made for a most pleasant and profitable meeting, we are well assured. But have all those who intend to present papers or make reports, either in the Sections or in the general sessions of the Association, duly notified the Chairman of the Committee of Arrangements of the title and length of their papers or reports? If not, they should do this without delay. The by-laws require the officers of the several Sections to make similar reports to the Committee of Arrangements concerning all papers or reports coming to their knowledge, at least one month prior to the time for the next meeting. If individuals and officers of Sections will do this promptly, it will enable the local committee to make the printed programme of work for the coming meeting much more complete than it has been heretofore, and the practical results will be correspondingly more satisfactory and profitable. The columns of the JOURNAL are open for the publication of any notices concerning the arrangements for the next meeting that may be desired.

THE CHOLERA BACILLUS.—Dr. Koch, in his fifth and most recent report concerning the doings of his commission for investigating the nature of epidemic cholera, states that the same bacilli were found in the intestines of those examined after death from cholera in Calcutta, as were found in Egypt; while in eight bodies examined after death from other diseases, no bacilli presenting the same characteristics were found, thereby strengthening the inference that they were peculiar to the cholera.

NEW YORK STATE MEDICAL ASSOCIATION.—The new State medical society with this title was organized in Albany, New York, February 6, 1884. A brief, but excellent plan of organization was adopted, prefaced by the following resolution:

"*Resolved*, That the objects of this Association shall be the cultivation and advancement of the science of medicine."

The ninth item in the plan of Organization is as follows:

"9th. The Code of Ethics, which shall form an integral part of the by-laws of this Association, shall be as follows: The same as that adopted by the American Medical Association."

The following officers were elected:

President, Dr. H. D. Didima, of Syracuse, Onondaga Co. 3d District.

Vice-Presidents: 1st District, Dr. J. M. Crawe, of Jefferson Co.

2nd District, Dr. T. B. Reynolds, of Saratoga Co.

4th District, Dr. B. L. Hovey, of Monroe Co.

5th District, Dr. N. C. Husted, of Westchester Co.

Recording Secretary, Dr. Caleb Green, of Homer, Cortland Co.

Corresponding Secretary, Dr. E. D. Ferguson, of Troy, Renssalær Co.

Treasurer, Dr. John H. Hinton, of New York City and Co.

Councillors: 1st District, Drs. John P. Gray, of Oneida Co., and Conant Sawyer, of Essex Co.

2nd District, Drs. J. W. Moore, of Albany Co., and Thomas Wilson, of Columbia Co.

3d District, Drs. Frederick Hyde, of Cortland Co., and Ely Van de Warker, of Onondaga Co.

4th District, Drs. E. M. Moore, of Monroe Co., and M. W. Townsend, of Genesee Co.

5th District, Drs. E. R. Squibb, of Kings Co., and A. Flint, Jr., of New York.

From the State at large, Dr. J. W. S. Gouley, of New York.

One hundred and sixty-eight members were present and signed the plan of organization.

The Association adjourned to meet in the city of New York on the third Tuesday in November, 1884; having authorized the Board of Councillors to appoint the delegates to the next meeting of the American Medical Association.

EDUCATIONAL QUALIFICATION FOR COMMENCING THE STUDY OF MEDICINE.—One of the most important and encouraging signs of the times, is the increased attention given to the general education of those proposing to study medicine. A considerable number of local, and some of the State, medical societies have adopted recently regulations which, if faithfully executed by their members, will do very much to practically elevate the character and usefulness of the profession, and in a direction where it is most needed. That part of the second resolution in the following series embraced within quotation marks was adopted by the Medical Society of the State of Pennsylvania at the annual meeting in May, 1883; and the whole series were adopted by the Trumbull County (Ohio), Medical Society at its regular meeting, January 31, 1884, as follows:

Resolved, 1.—That this Medical Society shall annually elect a board of Medical Examiners, to consist of three members, whose duty it shall be to examine applicants for admission to the study of medicine.

Resolved, 2.—All applicants for admission as students of medicine under the tuition of members of this Society shall present themselves before the Board of Medical Examiners and satisfactorily pass examination in the following requirements:

"I.—A written statement, previously prepared, setting forth the candidate's course of study.
II.—An essay.
III.—Writing from dictation.
IV.—Spelling—Oral and Written.
V.—Reading.
VI.—Geography—Descriptive, Physical.
VII.—Political Economy.
VIII.—History—Ancient, Modern.
IX.—Geology.
X.—Botany.
XI.—Chemistry.
XII.—Natural Philosophy.
XIII.—Mathematics—Arithmetic complete; Algebra, through quadratic equations; Geometry, through plane geometry.
XIV.—Languages—English, standard school edition of
English Grammar;
Latin, Cæsar's Com., 4; Virgil, 4; Cicero's Orations, 2;
Greek, the Reader; Gospels; Xenophon's Anabasis, 2."

Candidates for examination may elect in French, Keetle's Collegiate Course in French, Composition, Translation and Reading, and Lacomb's History of the French People, instead of Cæsar's Com., Virgil and Cicero's Orations; and in German, Whitney's German Grammar, Composition, Translation and Reading, Schiller's Willheim Tell and Gœthe's Faust, instead of the Greek Reader, Gospels and Xenophon's Anabasis, but such elementary knowledge of Latin and Greek will be required as to enable the candidate to intelligently comprehend the etymology of medical terms derived therefrom.

Resolved, 3.—No member of this Society shall receive any person as a student of medicine unless he present a favorable certificate from the Board of Med. Examiners.

Resolved, 4.—The time of study required by members of this Society shall be five (5) years including lectures.

Resolved, 5.—Members of this Society shall recommend their students to attend only such medical colleges as either require an examination for admission similar to the one required by this Society, or make the full three-years' graded course of study obligatory for graduation therefrom, and otherwise endeavor to elevate the standard of medical education.

Resolved, 6.—That this Society requests the Ohio State Medical Society to adopt the foregoing schedule of requirements and to use its influence to secure legislation making the same obligatory upon persons entering their names as students of medicine in the State of Ohio.

Resolved, 7.—That these resolutions be printed and a copy sent to each Medical Society in this State with the request that they early report their action thereon.

CORRECTION.

EDITOR OF THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION:

I am informed by my friend Dr. Mundé, that I was mistaken in attributing to him two deaths following the operation of trachelorraphy in my article on that subject published in your journal February 23 last. His only death out of 125 cases occurred two weeks after he operated from septic peritonitis. I must have seen it mentioned in two different journals and thus fallen into the error committed.

I take pleasure in making the correction..

Very truly yours,

JOSEPH TABOR JOHNSON, M.D.

916 Farragut Square, Washington, D. C.

SOCIETY PROCEEDINGS.

CHICAGO MEDICAL SOCIETY—REGULAR SEMI-MONTHLY MEETING OF MARCH 3 1884.

The large attendance was noted and the session was an interesting one. Two important topics were discussed.

The first was a rhetorical treatise read by Dr. Charles E. Webster on "Pott's Disease as Illustrating the Principles of Early Diagnosis." It contained much original matter from which we make the following extracts:

Mr. Chairman and Members of the Society

Perhaps I, more than others, can appreciate the importance of early diagnosis in the disease to be considered this evening, and as I walk the streets I am well assured by many living proofs that in the past there has been negligence in this regard.

The busy general practitioner, with his mind harrassed by a thousand cares, is liable to overlook the critical condition of some fretful, sickly child until the golden opportunity is lost, and he is burdened with the perpetual curse of an ineradicable deformity.

In order to present a paper of sufficient scope to be of general interest, I have arranged the following notes on the diagnosis of Pott's disease, which for the most part are compiled from standard author's.

If this paper succeeds in awakening sluggish memories, and thus some child is saved by early treatment from life long misfortune, it will have well fulfilled its purpose. The treatment of a case without a diagnosis is like waging war without a fortified base of operations. It can be done, and successfully, too, but it is not the highest refinement of art by any means. The most skillful physician, like the best trained general, may be forced into action without time for intrenchment, and if the odds are not too great against him he may win the day. Uneducated doctors, like untaught savages, kill, take captive, and are victorious. The one protects his nakedness with a flimsy shield, and the other his ignorance with a fanciful diagnosis. But neither the success in emergency of the expert, or the prosperity of the quack can justify departure in ordinary cases from the common course of procedure. Therefore it may be assumed that the recognition of the disease treated is the first requisite to successful practice.

Each disease has an individuality of its own, which is preserved through all its varieties and amid all its complexity of symptoms. Were this not the fact, scientific medicine would be impossible, for classification is the first necessity of exact science, and the identification of species is the first requisite to classification. Among diseases, species may be ill-defined, may run into each other by innumerable varieties, or a particular case may present some startling anomaly, but strongly marked individual differences are not inconsistent with a specific resemblance, and the most hazy nebula has as real an entity as the most sharply defined planet.

Admitting the entity of a given disease, the question arises, in what does that entity consist? It is like the individuality of a face. Some faces have a characteristic feature, a nose, an eyebrow, a chin that is characteristic, and that face is remembered by that feature. So certain diseases have pathognomonic symptoms; as the periodicity of the attack in intermittent fever, and such diseases can be diagnosticated by their pathognomonic symptoms. In general, faces are remembered not by a process of analysis, not by their individual features, but as single units of cognition. You may know a person intimately, but cannot tell the exact shade of his hair or eyes, the shape of his nose, or the cut of his beard. Let him shave, let time furrow his face with wrinkles, and pull out half his fading hair, you will still recognize him, though not a feature, but has suffered some appreciable change. It is the same with most diseases. It is often said of such and such a doctor, he has a peculiar knack of diagnosis. In what does his peculiar excellence lie? He is old and little educated in the schools, his sight is dim, his hearing dull, he cannot appreciate fine points of auscultation and percussion. The Faradaic current is beyond his ken; he can hardly assign a reasonable cause for a single symptom, but he unconsciously coördinates those symptoms that he observes into a single unit of consciousness, giving each feature its due prominence in the picture drawn, and by taking a telescopic view of the case, and by comparing this with similar pictures of other cases he has seen, he gives his diagnosis; his view is broad, he neglects much detail, but he sees the case as a whole. In general practice it is this telescopic power of the mind that makes a diagnostician. There is more to diagnosis than this, however.

In common life recognition of an individual is sufficient. In a court of law identification becomes necessary. In ordinary practice a snap diagnosis may be sufficient. In the scientific study of disease, in commencing treatment in a fatal or chronic malady, or in a formal consultation, an exact diagnosis is necessary. This may be reached by one of two methods, either directly, by comparing the symptoms of the case with the described symptoms of the disease, or indirectly, by the differential method, considering all possible maladies that might exist in the case, and eliminating them singly by the direct method, giving the preference to the residual disease. To illustrate these principles, let us consider the early recognition of Pott's Disease.

A glance at the patient may be sufficient for the provisional or snap diagnosis. You see a sickly child with an anxious expression of face, moving cautiously, seeking support from external objects, and carrying its trunk erect. Throw some object on the floor for the child to pick up. It stoops by flexing the legs, but still carries the body erect and steady, as though the spine was made of glass, and it was afraid of breaking it. The seeking of support, and carefulness respecting jar or strain of the spine, are the most distinctive features, and may be variously modified according to the age of the patient, the location and acuteness of the inflammation, and other circumstances of the case. With the first glance you have recognized spinal caries, but in so serious a matter

an opinion should not be given until the exact diagnosis is reached, which necessitates a history of the illness and a thorough examination. If unwilling to assume the responsibility, or unable from press of business to take the trouble, send the case to one who will, for you have before you for treatment a patient destined to live in spite of the grossest negligence, but whose future happiness and usefulness alike depend upon the care and fidelity of some one who for years shall enforce those simple rules of life, and adapt with care and accuracy the appliances necessary. * * * * I can well assure you, gentlemen, that highway robbery is a much more honorable mode of obtaining wealth, than by careless diagnosis, procrastinating measures, or insufficient treatment, to rob a child of the slight chance of maintaining that normal bodily symmetry, which is a prime requisite for reaching his highest physical, mental and moral development.

The history of the case will vary according to the varieties of the disease. In this review of the subject it is not my intention to give a classification of these varieties, therefore it will suffice to mention all the symptoms likely to occur, premising that the absence of symptoms, or the inversion of their order, does not preclude the possibility of spinal caries. (The balance of Dr. Webster's paper was ably condensed from the best writers, but would occupy too much space. We give place, however, to his tabulated statement of differential diagnosis as follows):

TABLE FOR THE DIFFERENTIATION OF POTT'S DISEASE.

Pott's Disease.	Strain or Cellulitis.	Hysterical Spine.	Muscular Rheumatism.	Coxarum Morbus.
Prodromic stage..... May be months in duration.	Absent.	Absent.	Absent.	Months in duration.
Motions and attitudes.. Suggest anxiety to keep the back from hurt.	Show a stiff back.	Natural.	Not characteristic.	Suggest trouble in one leg.
Pain intermittent... Remote from spine.	From motion with local tenderness.	Very sensitive at a few points to a light touch.	Not local, at one point.	In leg.
Pain constant..... In the spine increased by pressure.	Increased by pressure.	Patient writhing in pain.	Motion painful.	In leg.
Stiffness ..... Jar and pressure.. Local. Aggravate symptoms. Relieves symptoms.	Local. No effect	Absent. Give varying results.	Absent. Negative.	Of hip. Aggravate symptoms. Relieves symptoms. Lengthening of leg.
Extension ..	No effect.	No effect.	Negative.	Negative.
Early deformity ... Angular.	Absent.	Absent.	Negative.	Absent.
Paraplegia.. After deformity.	Absent,	Hysterical.	Negative,	From abscess.
Tumor. ..... From abscess.	From abscess.	Absent.	Negative,	

Sacro-Iliac Disease.—Resembles hip disease.
Torticollis.—If from cervical caries the patient supports the head with hand. Palpation detects thickening and tenderness of vertebra.
Superficial Caries.—Constitutional or traumatic causes, abscess, no deformity.
Aneurism of Aorta.—Deformity slight, not angular, signs of aneurism.
Disease of Kidney.—Differentiate by the urine.
Lateral Curvature.—Deformity not angular; no stiffness.
Rachitis.—Deformity not angular; affects other portions than the spine.
Muscular Weakness.—Deformity obliterated by lying down.
Hernia.—Sudden disappearance of tumor, with absence of spinal symptoms.
Paraplegia.—Without deformity may be ascribed to Pott's Disease if there are spinal symptoms and no other assignable cause.
Diseases of Childhood.—With a long prodromal stage are to be differentiated by the concomitant symptoms.

Thus, a prodromal period, or period of incubation, is to be expected during this stage, which may date from some sickness or injury, or may arise without any assignable cause, and be of several months' duration. The patient shows an indifference to his ordinary amusements, and an unnatural fretfulness; he may become awkward in his movements, stumbling in his gait, or assume unlikely attitudes. There may be constitutional symptoms, as loss of appetite, anæmia, and a rise of temperature. There may be nervous symptoms suggestive of paralysis, as weakness, numbness, or tingling sensations in the lower extremities, with irritability of the bladder. If the disease is high in the column, gastric irritation, with a sensation of constriction of the chest. If upper cervical, difficult deglutition, choreaic movements of muscles of the neck, numbness of the arms, and laryngeal cough, or a choking sensation. Pain is one of the most unreliable of all the symptoms. It is generally located anywhere rather than at the seat of the disease, and many patients are entirely free from it. It is thought to be caused by the irritation of the spinal nerves, at the point of their exit from the foramina, and is referred to the ultimate termination of those nerves. When it occurs it may be constant if local, or intermittent if remote from the spine, and be increased by fatigue or sudden jar. Acute pain is suggestive of a suppurative inflammation, while a dull ache is more characteristic of dry caries. The location of the pain indicates the location of the disease. If thoracic, the disease is cervical. If in the abdomen and lower part of the thorax, the disease is thoracic; while if through the thighs, the disease is lumbar. A satisfactory history of the case having been taken, the patient is to be stripped and inspected. Flexion of the spine is avoided, and a constant effort made by the patient to support himself; he leans upon the furniture, rests his hands on his thighs, or lies across some object; his movements are constrained, in order to avoid jar; he shuffles his gait. From reflex muscular spasm there may be a partial flexure of the thighs, and a local stiffening in the portion of the spine affected. Torticollis may occur; the head may be thrown back and the shoulders raised; the respiration may be grunting in character, with limited motion of some of the ribs. The first evidence of the location of the disease visible to the eye may be a slight flattening of the normal curves of the spine, with stiffening of the affected part, an indication of little value in young children when the curves are not developed. There may be slight bulging, or a slight lateral angle in the line of the spinous processes at the diseased point, and finally, as the commencement of the deformity, there is the forma-

tion of a knuckle, produced by the tilting up of the spine of the vertebra whose body is most eroded. Follow the inspection by a physical examination to establish the diagnosis and locate the disease. Let the patient jump down from a slight elevation, as a low stool. This concussion may produce a cry of pain, a slight confusion of ideas, the child looking surprised, or even a fall.

Another method of producing the same result is to press down on the head and shoulders, producing a cry and muscular spasm; however, these are both rather dangerous experiments; rubbing the back briskly with the knuckles makes the vertebral spine stand out in red spots, this may assist in detecting any displacement; pain may be produced at the point of disease by percussion, firm pressure, compression of the chest, crowding the heads of the ribs against the diseased vertebra, a piece of ice, or a thimbleful of hot water passed down the back, and lastly by lateral flexion of the spine, the patient lying on his face and the body being grasped by the pelvis and shoulders. If, with the patient standing erect, the palm of the hand be placed against the suspected region and then the spine bent in various directions, any local stiffening can be detected, the neighboring healthy parts being felt to move; the heat of the inflammation can sometimes be detected by the hand or by the surface thermometer. There may also be slight diffuse swelling. If the patient has pain of any sort, impeded respiration, or any uncomfortable sensation, lay him across the knees, on a table, or place him in a spinal swing and make firm gentle extension or partial suspension, observe if his symptoms are relieved. If he gives a sigh of relief and breathes freely while there is a cessation of his pain, and if the reverse of these maneuvers, by pressing the diseased bones more closely together, aggravate his symptoms, the diagnosis may be considered as fully established and a plan of treatment adopted. There are cases where the first symptom noticed, is the knuckle of the commencing deformity, and others where paraplegia or abscess may occur without deformity. In obscure cases where the direct diagnosis is difficult, or in any case where especial accuracy is desired, the table for differential diagnosis will be of service. Errors in case of some of the diseases mentioned are much too common, and an occasional reference to such a table, though it be far from exhaustive, will be a valuable aid to the memory. Theories of treatment and facts of general scienee can be found in text-books. They may be held in memory, or when needed, sought by reference, as is most convenient, but it is the duty of the student ere he becomes a practitioner, to become at least tolerably expert in the snap diagnosis of common diseases, if not invincible in exact diagnosis. How are these powers to be acquired? By only one process, *i. e.*, by the study of disease, by noting the gross appearance of disease as well as its most minute features; by clinical practice supplemented by careful reading, and by acquiring the greatest possible proficiency in all those methods of physical exploration without which scientific medicine would be an impossibility. Many a young graduate enters the sick room of his first patient with trembling and abject fear. He has learned to auscultate and percuss with an instructor at his elbow, and to listen by the bedside in the hospital to an exact description of a patient's symptoms. But to interrogate and examine a patient with a view to identifying his disease and relieving his sufferings is a thing to him as strange as were mounted horsemen to the American aborigines. At the commencement of one's course, if he could learn the practical duties of a nurse and accustom himself to attendance on the sick, he would have done far better preliminary work than if he had mastered every department of natural science. For then the clinic would be real practice, the didactic lecture an illumination of intelligible pictures and not a weird phantasmagoria of the unreal. While the work of pathology would become the survey of old battlefields, the study of the historic part which is to fit him for coming victories. In conclusion the writer quoted his honored teacher in anatomy, Dr. Oliver Wendell Holmes, who from the eminence he had attained by a life of philosophical labor, sends down the clew to guide the student groping among the underbrush of routine study. "I would not undervalue the branch I teach. I recognize the incidental importance of all the subsidiary branches which form a part of the curriculum of this and other schools; do full justice to them or you will not probably do justice to your more immediately practical studies, but your hardest study must be at the bedside. To go hastily from the library of old books and the laboratory of new experiments to the bedside of disease is imitating the presumption of those rash profligates who, as Thomas Boston says, think they can take a leap out of Delilah's lap into Abraham's bosom."

In the discussion which followed, a number participated. Among those noted were Dr. W. E. Clarke, who expressed his gratification at hearing the paper, and thought the many learned points therein contained should be of much interest to the profession generally.

Dr. R. G. Bogue also was greatly pleased with the subject announced and with the views of the writer. At present he has a case under observation that has caries in the upper dorsal region, that possibly would require the greatest skill in deciding positively whether the disease could be retarded in the child and deformity prevented.

Dr. D. W. Graham had considerable experience in treating this class of troubles. The greatest number of his cases had come to him throngh the dispensary, and were charity patients. The speaker thought too much importance could not be attached to early diagnosis in these unfortunate cases, and it should be regarded as a crime for parents to neglect their children at an early stage, or who failed to have them treated. The table prepared by the author is admirably gotten up. One suggestion he desired to offer, namely, that Pott's Disease might be possibly confounded with a simple affection, such as a chronic bowel trouble with pain, rather constant, or where general debility was present, or where there was prolonged disorder of the digestive organs, and if any doubt existed as

to the malady, we should make further investigation, and insist on making careful observation of the child.

Dr. R. Tilley desired to add his testimony to the value of the paper, and that we should be fully conscientious, especially in this class of cases, to make an early diagnosis. He thought, however, that the parents of charity cases did not pay proper heed to our advice regarding the welfare of their children.

Dr. Webster, in closing, thought the first speaker's suggestion was well-timed, although, possibly, muscular rheumatism may be more likely mistaken for Pott's Disease rather than all of those in the table.

Dr. Oscar J. Price then gave a report of a case of aneurismal tumor from the arch of the aorta, with the causes, varieties, difficulty in diagnosis, treatment, history and pathology of his case, of which the following main points are given:

G. R., age 40; weight 140; temperament gouty or sanguine; married; stone contractor; was first visited by the writer on the morning of the 4th of February last. The patient had just returned from a Southern trip of some three weeks' duration, having arrived home about two hours previously. Found him sitting up and dressed, quite free from excitement, and apparently in no way entertaining serious apprehension as to his condition or welfare. He had complained more or less during the past year, and there had been constantly a dull aching pain in the muscles of the right arm, which gradually extended to the upper portion of the right chest and centered there. It had become lately quite acute and hard to bear. He also had some cough and dyspnœa; was conscious of an unusually rapid action of the heart, which particularly attracted his attention upon any exertion or excitement. He stated that his trouble had been considered by his former medical attendant as muscular rheumatism, for which was pursued constant treatment, covering a period of many months. Finally, he was advised to make this Southern trip, with hopes of recovering his health; could not say whether this advice had been given with the belief that there existed a tendency to phthisis. No benefit having occurred from the change of climate, as he was conscious of feeling worse, and became more easily exhausted upon the slightest endeavor, he resolved to return home much sooner than he at first contemplated, and while in a sleeping-car was suddenly taken with a hæmorrhage from the lungs, which was very profuse and exhausting. Receiving some temporary medical attendance at the time, he soon rallied from the shock and was enabled to pursue his journey home. In response to inquiries, he stated he had generally considered himself rugged and healthy; had led a fairly temperate life; some 12 years ago, however, he had an attack of acute inflammatory rheumatism and had also in earlier years contracted syphilis.

A careful and exact examination of his chest was fraught with considerable difficulty, owing to the fact of his having just emerged from a severe hæmorrhage, and the consequent danger of exciting another. Much percussing of the chest not appearing to be warrantable under the circumstances, I was content with as gentle an examination as possible. There was a complete absence of pectoral or vocal fremitus, and indeed a total absence of all sounds over the right thorax, as elicited by auscultation. Very gentle and limited percussion appeared to reveal the existence of a cavity of presumably large proportions. In the upper portion of left lung were evidences of bronchopneumonia, while the heart was found to be crowded considerably to the left, its valves working normally, but much accelerated in action and volume. Instructions were given for the patient to immediately take to his bed, to remain perfectly quiet, and to be given cold drinks and food with a view to avoiding, in so far as possible, other hæmorrhages presumably imminent. In furtherance of this, he was placed upon a mixture containing digitalis, ergot, sulphuric acid and opium, in proper doses, with a view of controlling the expected hæmorrhage. The next morning was called early, and found patient had just had another hæmorrhage of about one pint, and was in a state of the greatest prostration, bathed in cold, clammy perspiration, and suffering acute pain, extending from about the second right intercostal space near the sternum through to the back. One gr. of ext. ergotine was immediately injected into his back, and ¼ gr. morphia sulph. in his arm. Stimulants were exhibited, and in the course of two hours his condition had materially improved, circulation and warmth being again restored, and resting quite easily. * * *

The following day, Dr. J. P. Ross saw the case in consultation, and then a very careful and extensive examination was made. It was his opinion there was an effusion in the right chest, and acting upon this belief, an aspirating needle was thrust through an intercostal space twice at different points, but without return of fluid other than a little blood. No resistance was met with, the needle, after introduction, being tipped in different directions without obstruction.

It was thus quite evident there was no effusion worth consideration, also the existence of a cavity pretty well established presumably, from collapse of lung and accumulation of blood clot, we were now warranted in arriving at but one conclusion. When it was considered that there had been no emaciation; no hectic; no tuberculous cachexia; the character and suddenness of the invasion, with the physical signs following, led irresistibly to the conclusion of the existence of a ruptured, leaking aneurism. Remedies to control the excitability of the heart's action, to allay pain, conjoined with perfect quietude, were all that was now attempted. The following night he had another severe hæmorrhage, from which he only partially rallied, only to be plunged into yet another the succeeding day, from which he gradually sank, dying on the evening of the next, a little over one week from the first hæmorrhage.

Autopsy kindly permitted by friends. Besides the author, there were present Drs. J. P. Ross, J. A. Robinson and E. P. Murdock. Eighteen hours after death, rigor mortis well established; subject fairly nourished; skin white. Incision from upper part of sternum to ensiform cartilage, thence along course of costal cartilages. Incision into right pleural cavity

caused a small amount of sero-sanguineous fluid to flow out. Heart revealed crowded to the left, and large blood clots in right pleural cavity; blood removed to the amount of over two quarts. There now appeared a large sacculated aneurism of the first portion of the arch of the aorta, enclosing a large fibrinous mass some four inches in diameter. Pericardium adherent to heart; sac of aneurism adherent to right pleura; p. m. clot in right auricle; aneurism ruptured, opening into the pleural cavity at the lower portion of upper lobe of right lung in front, also an opening into the upper portion of the right upper lobe communicating with a bronchial tube, the lung being filled with blood, completely collapsed, and its tissue very fragile. The heart was enlarged and dilated, the walls of the left ventricle being thin and infiltrated with fat, especially toward the apex. Very slight fibrous deposit or vegetation on one aortic valve; the sac of aneurism so large as to contain a man's double fist, its distended vascular coverings having undergone such changes as to render them quite unrecognizable. The inner aspect presented a rough, uneven surface, composed of laminated fibrin and fresh blood clot. These layers of fibrin had been built upon each other into liberal proportions, so as to virtually constitute all that remained of the aneurismal sac.

(The specimen was then presented for observation). In contemplating this case it is interesting to observe the length of time the patient survived after such a formidable rupture, which evidently ushered in the first hæmorrhage, the inference being that the heart, temporaily relieved of its force and impetus, permitted a large-sized coagula to block up the opening for the time, subsequent hæmorrhages resulting from the instability of the same, which, doubtless, was considerably guarded against by perfect repose and quiet. The usual connection between aortic aneurism and ventricular hypertrophy is again illustrated in this case. There had also been, as already stated, pericarditis, which presumably took its origin from the severe attack of inflammatory rheumatism several years before, although it is perhaps questionable if the propulsive action of the heart alone is able to produce aneurism, unless of a diseased artery. It is reasonable to suppose, however, that a disease which may produce endocarditis and pericarditis may also cause endoarteritis. The history of the case also furnishes another somewhat commonly accepted cause for aneurism, negative testimony to the contrary.

Military statistics would appear to demonstrate that a large number of cases of inflammatory involvement of blood-vessels ending in atheroma or fibrous thickening of the coats of the vessels are of syphilitic origin. Admitting that this is by no means established it would still appear that it is a disease in common with rheumatism tending to impair, not only the functional properties, but the nutrition and structure of arterial walls, and is thus justly entitled to due consideration as a possible element in the case. Reasoning by exclusion, the patient had not been addicted to more than ordinary, or a very moderate indulgence in alcoholic drinks, and therefore can hardly be said to have furnished this supposedly frequent factor to the malady. Muscular effort or over-exertion also, as superinducing elements, appear to have no proper claim to consideration, as the patient had for fifteen years preceding death led a very quiet life relieved from manual labor. In estimating the general causes of aneurism, it is, of course, an open field for conjecture and capable of many and diverse illustrations. Still it would appear that the history of this case furnishes one, if not two, very reasonable and commonly accepted conditions leading to its development. Diseases which frequently terminate in a chronic inflammation of the internal coat of an artery may be properly classed as predisposing to aneurism, and such this case affords. Aside from traumatic origin, it is evident that structural lesions of a destructive tendency, involving the middle and internal coats of arteries, play an important part in the production of aneurism.

Thus we have the conditions most favorable to the formation of plastic deposits on the free surface, which are so commonly met with in the aorta or larger vessels. From this plastic inflammatory process commencing in the lining membrane morbid changes are initiated, involving the middle coat, which, becoming thinned by pressure, soon softens and yields, forming a kind of pouch or depression. Firm adhesions are now found between the two membranes, and we have the commencement of an aneurism. It is evident the natural tendency of such a destructive process would be to rupture, but, in accordance with the wonderful preservative powers of nature, conservative forces are set into action, also the external coat becomes thickened, indurated, and supported by this deposition of plastic matter going on beneath it until it becomes a firm and rugged barrier, thus preventing for a long time, and sometimes permanently, the perforation of the sac. It is, however, inelastic, and performs no proper part in the distributing of blood which passes through it. Its caliber, therefore, must gradually dilate, its pouch-like form becoming the natural receptacle for the deposition of coagula and fibrous deposit, and the specimen affords an excellent observation of the laminated type, built upon itself layer upon layer, adhering firmly to the interior of the sac, and arranged concentrically like the coverings of an onion. Its large size would seem to indicate it had been a long time in forming.

DISCUSSION.

Dr. R. Tilley thought if syphilis was a cause of aneurism (which was remote in this case, in his having the disease prior to twelve years ago), it did not establish the fact that the man had aneurism.

Dr. H. J. Reynolds asked if there were no murmurs present? Answered no. There were no sounds in the right portion of the thorax. The heart was crowded out of its place (to the left) and enlarged.

Dr. P. C. Jensen inquired of the author if there were ever present girdled pains around the patient's chest at night? Answered, would hardly regard them as such. There was a good deal of pain in the right chest, in the second intercostal space, especially when the violent hæmorrhages occurred.

Dr. W. L. Axford thought aneurism was not always easy to diagnose. The great Liston once opened what he supposed to be a boil on the chest of a man, when the patient at once sank, bleeding to death, caused by an aneurism that he had cut into.

Dr. C. E. Webster asked, if there was any erosion of any of the vertebræ, or symptoms of erosion of the sternum, present?

Answered, no, not the least.

Dr. W. E. Clark asked, how long before death was the patient aspirated?

Answered, 36 hours.

Dr. L. H. Montgomery asked, if the patient had taken iodide of potassium for rheumatism, and for the specific disease, as well, probably, as for the influence it may exert over aneurisms, and further, was there no incipient stage of the aneurism present a year ago?

Regarding the case reported. I am well acquainted with a brother of the deceased; a gentleman who is a carrier in the post-office, and whose family I have attended for several years. He told me that nearly two years ago the deceased had witnessed a sad accident, in which his 12 year old son had been killed; that his body was mangled horribly, while he stood but a few feet away at the time the accident occurred, and he saw his boy's head crushed off. The father stood apparently motionless and speechless, his features becoming very pale at the ghastly sight he beheld. If this be so, could not the heart's action temporarily intermit or cease to beat for a few pulsations, caused by a sort of paralysis, the result of what he had seen? It was from about this date that he had complained of more or less pain in the side and chest.

Dr. Price, in closing, stated in reply to the last speaker, that he had treated the patient a year ago, and gave iodide of potash in 10 grain doses to him, three or four times a day for four weeks. Secondly, he thought the accident, which has just been spoken of, might possibly have produced the starting or incipient stage of the aneurism; and thirdly, while the deceased was South some ten days before death, he engaged in violent exercise, that of jumping 8 feet 2 inches. This he did twice, and became ill shortly after.

Upon motion the society adjourned.

L. H. M.

STATE MEDICINE.

LAWS OF INHERITANCE.

BY NATHAN ALLEN, M.D., OF LOWELL, MASS.

The following extracts are from the fourteenth annual report of the Board of State Charities, of this State. The subject of the laws of inheritance is here discussed in a lucid and comprehensive manner. Few gentlemen have studied it more thoroughly than the writer of this report, Dr. Allen, of this city, with whose writings our readers are familiar.

In the second report of the Board of Charities, it was stated that one of these primary sources is an "inherited organic imperfection of the body, a vitiated constitution, or, in other words, poor stock." Since that statement was made, our conviction of its truth has been confirmed more and more by careful inspection and inquiry among the inmates of the State institutions. While many of these persons, by indolent and vicious habits, have contributed to their own degradation, still, there were predisposing causes in their constitutions which had a powerful influence in the same direction. Many inherited feeble bodies and weak minds, with strong propensities. They commenced life amid circumstances most unfavorable for developing the better qualities of their nature. In attempting, therefore, to ascertain everything that has formerly contributed to make these persons paupers, criminals, or lunatics, we must not only take into account their own agency, but must consider well the nature and amount of capital which they had to start with in life.

No fact in science is better established than that there is a most intimate mental as well as physical relation between the parent and the child—between each generation and the succeeding one. This relation has been well expressed in the proverbs, "What is bred in the bone can not be whipped out of the flesh," and "Like begets like." The hereditary relation has, we believe, a far greater agency in producing social evils than has generally been conceived. This relation extends, by transmission, not only to the form of the body and the features of the countenance, but to every part of the system—to the quality of the blood—especially to those vital organs which give stamina of constitution and beget mental predispositions. Whatever agencies, therefore, are calculated to injure the body or deprave the mind, to incapacitate an individual for self-support, or to make him a corrupter of others, should certainly be exposed by the guardians of public charity.

Among the most mischievous agents operating injuriously upon the human system, is alcohol; and whether we consider the extent of its abuse, in various forms, or the terrible effects which it produces, it certainly stands foremost as a cause of pauperism and other evils. It poisons the blood, and produces a diseased or morbid condition of almost every organ of the body. It affects the brain, impairs the intellect, perverts the moral sentiments and the will, and increases unduly the activity and strength of the worst propensities. It prostitutes the higher to the lower nature of man, changing what should be the true aims and objects of life to those of a low animal nature.

Closely connected with the alcoholic poison is another, which, though not so manifest in its effects, has a most destructive influence upon human welfare. This poison arises from habits of licentiousness, and its evil effects do not cease with the living, but extend through successive generations. The syphilitic poison operates on the human system in so covert a manner, and in such a variety of ways, that it is sometimes found difficult to trace out all these effects; but the more thoroughly the pathological and morbid conditions of the body are brought to light by modern science, the more extensively are discovered

the mischiefs which this poison has wrought. If the amount of vice, disease and pauperism produced from this source alone could be made known, it would surprise people. In some respects this poison is more destructive of health and life than the poison of alcohol.

But there are other modes of abusing the reproductive organs which injure most seriously both body and mind. A careful inspection of the inmates of our almshouses and hospitals will show a vast amount of suffering from this abuse. It is the hereditary effects of these evils that make them especially significiant in the production of pauperism and insanity. To aggravate the matter, their effects are communicated in an intensified form, from generation to generation, and it is very difficult to check or eradicate them either by human means or through the recuperative powers of nature.

Besides these two poisons. there are other agencies that injure the body and enfeeble the mind, such as narcotics, stimulants, over-medication, &c. Then come irregular habits, want of proper nutrition, and a train of diseases which either destroy their victims or make them helpless and dependent. When the physical system is impaired or broken down, the mental faculties frequently become enfeebled and depraved, so that not only poverty and temporary dependence, but habitual indolence and shiftlessness also ensue. Such a state of things makes paupers, who, by natural association, form social and domestic relations with each other. The more such persons become associated together, either in families or communities, the more unfavorable is the influence of one upon another, the whole tendency of things being to sink them lower and lower in the human scale. Worst of all, whatever offspring these persons have are pretty sure to be impregnated with vice, pauperism and crime, by the law of inheritance as well as by the habit of association. A careful inquiry into the origin, history and character of the inmates of our public institutions will abundantly prove and illustrate these statements.

So important was this subject deemed by the Senate and Assembly ot New York, that an inquiry into the causes of pauperism was ordered in 1873, which has recently been completed and its results made public. The inquiry seems to have been thoroughly made by the Secretary of the Board of State Charities, occupying his time, more or less, for several years. Over 12,000 persons, scattered in the town, city and county almshouses of the State, were examined, with reference to the leading facts connected with their pauperism. Of these, 6,566 were foreign, born in the almshouse; 3,106 could neither read nor write; 6,133 had been intemperate. Of the 4,147 chronic insane, 44 per cent. had been intemperate. Of the whole 12,000, 2,030 were homeless children, 1,750 of whom had pauper fathers and mothers. The average stay of all the paupers iu the almshouses was 4.88 years—almost five years' residence. More than 30 per cent. of the paupers had intemperate parents; many had a large circle of relatives who had been or were then in almshouses. Few persons were found to be paupers by their own misfortunes in business, or sudden loss of property. The dependence of most paupers was induced largely by immoral and sensual habits, long indulged, or by habits of idleness and shiftlessness, which in many cases might have been early arrested by proper measures.

As one of the results of this inquiry, the New York Legislature passed a law directing that children found in the almshouses of the State should be removed, and discontinued thereafter the entrance of children into such institutions—intending to provide for them in asylums, or find them homes in private families.

While this inquiry was going on, the New York Prison Association provided for a careful investigation into the causes of crime and pauperism among the inmates of the jails and prisons of the State. Among the results of this investigation, the history of a remarkable family is given, under the name "The Jukes," extending back six generations, where, from one bad woman, nearly a thousand persons, by birth, relationship, and association, became paupers or criminals. This history shows the great power and influence of heredity and early association in the production of pauperism and crime, more forcibly than ever before.

It demonstrated that the seeds, or primary causes, of these evils are connected with the great laws that govern human life farther back than has been generally supposed. This family history brings up, also, the relations between "heredity and environment," and suggests means or agencies which may be employed to prevent or check the miseries originating from these two sources. The more this whole subject is investigated, the more evident it becomes that in order to check the increase of pauperism, crime, and insanity, the remedy must be applied to their primary sources. It will be found, too, that these are, to a great extent, under the control of human agency.

A careful examination of all the facts shows that, in addition to the hereditary influence, ignorance, idleness, intemperance, and prostitution are prime factors that enter into the complex product of pauperism and crime. The hereditary agency precedes these personal factors, and predisposes to their activity and control. It is evident that the germs or predispositions originate in physical organization and development. These secondary agencies would not be called out, or would have but little influence, if the right kind of material for their operation had not been provided. This proposition may be more clearly illustrated in the case of disease and insanity. It is found, as already said, that by a thorough and systematic application of sanitary science about one-third of all disease may be prevented, and human life much prolonged. At the same time, inherited imperfections, weaknesses, and predispositions to disease already existing in the human body, stand in the way and prevent the full benefit of sanitary agencies. These hereditary predispositions or liabilities to disease are, however, very much alleviated, if not checked in their operation, by hygienic means; but if they did not exist, how much less disease would call for treatment, and how much more success would attend well-chosen measures!

Now, disease itself among the poor, especially where there is not much native energy and perseverance, is a primary cause of pauperism; and, if disease become chronic or organic, its influence is still greater. It is not the cost of illness (though this is no small item) so much as its effects in disabling the body for work, and breaking down the mental energies, which does the mischief. And to make the matter worse, the seeds of disease are communicated to offspring in an aggravated or intensified form. Besides, the preliminary stages of illness among these classes being often neglected, and the recuperative powers of nature very small, diseases of all kinds, and especially those of a scrofulous nature, are quite sure to have their run, and become chronic. A constitutional disease, becoming chronic and combined with scrofula, is a powerful factor in the production of pauperism. The fact is, hereditary influences, in a great variety of ways, enter largely into pauperism. Thus, the more extensively sanitary science can be applied among the poorer classes, in the prevention and cure of disease, the more it helps to diminish pauperism. In this way, boards of health become public benefactors, and Legislatures should provide most liberally for their support.

In the history of the insane, the deaf and dumb, the blind, the idiotic and feeble-minded, hereditary influence is still more apparent. It is well known that these defective classes afford a large number of paupers. In regard to the insane, the fact is pretty well established that the malady in fully one-half of the cases may be traced, directly or indirectly, to hereditary influences, and that in the other defective classes a still greater proportion can trace the origin of their troubles to this source. In the case of other paupers, it is more difficult to follow out hereditary influences; but the better the laws of descent are understood, the more significant become the indications of heredity in pauperism. It should be borne in mind, that it is not the mere form of an organ or similarity of construction that is transmitted by parents, but the peculiar uses to which the organs are applied, or rather the habits and character of the individual. Let those portions of the brain which officiate as the organs of the lower propensities be more active than those connected with the intellect and the moral sentiment, and kept continuously so for years, and a predominance of the animal nature is sure to be transmitted from the parent to the child. The same law holds good as to all parts of the brain or other organs of the body. Let selfishness, laziness and sensual habits control the parents, and their offspring will surely partake of the same character, provided surrounding associations do not prevent.

SURGEON-GENERAL OF THE NAVY.—The President has appointed Surgeon Gunnell as Surgeon-General and Chief of the Bureau of Medicine and Surgery of the Navy.

M. TARNIER has been appointed Professor of Obstetrics and Diseases of Women and Children in the Faculté de Médecine, of Paris.

DOMESTIC CORRESPONDENCE.

FROM WASHINGTON.

The bill to provide for the establishment of a bureau of animal industry to prevent the exportation of diseased cattle, and to provide means for the suppression and extirpation of pleuro-pneumonia and other contagious diseases among domestic animals, the provisions of which were given in No. 1, Vol 2, of this journal as having been introduced into the House of Representatives, was taken up by the House on February 5. The bill was accompanied by several reports. The report from the Committee on Agriculture was unanimous in its recommendation that the bill pass, and after considering its various clauses, it emphasized that clause which provides for the exportation of live stock from the United States under such terms and conditions as the Secretary of the Treasury may from time to time prescribe, and referred to the action of foreign governments looking towards their own protection against our want of legal enactments in the premises. The British government has given notices in both houses of Parliament of motions to be made to totally prohibit the landing of our animals on its shores. The French government recently published an edict prohibiting the importation of any of our pork product into France; this shuts us out of a trade which had already reached $19,000,000 annually and was increasing at the rate of about $5,000,000 yearly. Germany has already placed a restriction upon the importation of these products, and there are indications that other countries may follow this lead. A statement from Dr. D. C. Salmon, veterinary surgeon of the Department of Agriculture, gave the extent of pleuro-pneumonia in Connecticut, New York, New Jersey, Pennsylvania, Maryland, and the District of Columbia, as large and dangerous. Pennsylvania, by the vigorous methods used to extirpate the disease, is now believed to be free from it. The reasons for believing it to be contagious were reiterated, and the fact that the danger was greater than the extent of infected territory and number of diseased animals would indicate, was strongly put. The remainder of Dr. Salmon's argument was taken up in showing the inefficacy of State action, the advantages of the work being directed by the United States government, the fact that the presence of pleuro-pneumonia costs annually more than would be necessary for its destruction, and the importance of investigating other diseases.

The discussion seemed to turn mainly upon the interference of the Federal government with State authorities, and was continued through parts of the daily sessions of Feb. 5, 6, 23, 25, 26, 27, and 28. Mr. Belford, in his argument, gave in some detail the experimental researches of Drs. Law, Detmer, and Salmon, in investigating and determining the causes producing, and, if possible, in discovering remedies for the diseases of hogs and the other domesticated animals, which he put in a very concise and interesting form. On Feb. 28 the bill was passed as follows:

It provsded that the Commissioner of Agriculture shall organize a bureau of animal industry, and appoint a chief thereof, whose duty it shall be to investigate and report upon the number, value, and condition of domestic animals of the United States, and also the cause of contagious and communicable diseases among them, and the means for the prevention and cure of the same. He is authorized to appoint two competent agents, whose duty it shall be to report upon the best methods of treating, transporting, and caring for animals, and the means to be adopted for the suppression and extirpation of contagious pleuro-pneumonia. The bill further provides that the Commissioner of Agriculture may expend so much of the money provided by this act as may be necessary in paying for the animals it is deemed necessary to slaughter, and in such disinfection and other means as may be necessary to extirpate disease. The authorities of the States shall pay one-half of the expense of the animals it is deemed necessary to slaughter, and one-half of the cost of disinfection and care of the herds of cattle. It prohibits the transportation from one State to another of any live stock infected with any contagious or infectious disease, and provides for the prosecution of any person violating this prohibition. The sum of $250,000 is appropriated to carry into effect the provisions of the bill.

NATIONAL MEDICAL SCHOOLS BY ACT OF CONGRESS.

Mr. Editor:

In common with the profession, I am watching with a good deal of interest the development of the plan to establish schools of medicine by law of Congress, as contemplated in Mr. Call's bill for the establishment of a national medical university, and I am much pleased with your suggestion, to add chairs for the demonstration of the claims of the "faith cure," and the total abstinence from alcohol schools, and I hope your suggestion will meet with the favor of our representatives. The greatest difficulty will be in finding enough allopathic doctors to fill the chairs allotted to that school. I have been a member of the American Medical Association since its formation, and am free to say, I have never met an allopathic doctor amongst its members, or for that matter anywhere else. I have met electropathists, homœopathists, hydropathists, eclectics, faith curists, prayer curists, mesmerists, fumblers, and blue glassists, but never an allopathist. A doctor who proclaims "contraria contrariis curanter" to be the only true principle of practice, and that he pursues that practice to the exclusion of all others, or who believes in it at all as a scientific dogma, must be a rare bird, indeed. The Code of Ethics does not prohibit a member of the American Medical Association from adopting any therapeutic method that his reason or experience may suggest to him for the help of his patients, but, he may not proclaim that method to be the only rational or scientific method of treating disease to the exclusion of all other methods.

I hope Call's bill will become a law, because I think it will do more for rational medicine than can be done in any other way, simply because it will dispel a popular delusion originating in schools that have ever made their success by catering to popular credulity, and crying out against a profession that long ago cut loose from all theory, all dogmas, and adherence to the teachings of any master, only admitting a thing to be absolutely true, when proved by the general test of universal experience.

It is about time that the public should learn that personal skill is the desideratum in the practice of medicine, independently of any school or any master. There are many methods of treating disease, but the success of any method depends on the skill of the individual practitioner, and not upon any iron-clad dogma, and the chief glory of modern medicine, as represented by the profession at large, consists in its entire freedom of opinion on all questions of science and art in their application to practical ends.

Daniel Leasure, M.D.
36 Jackson st., St. Paul, Minn.

Official List of Changes in the Stations and Duties of Officers Serving in the Medical Department United States Army, from March 1, 1884, to March 7, 1884.

Perin, Glover, Lieutenant-Colonel and Surgeon, Medical Director, Dept. of Dak., leave of absence extended 20 days. (S. O. 23, Headquarters Division of the Missouri, March 5, 1884.)

Bill, J. H., Major and Surgeon, granted leave of absence for one month. (Par. 1, S. O. 20, Headquarters' Dept., Platte, March 3, 1884.)

Baily, J. C., Major and Surgeon, granted leave of absence for one month, to take effect on or about March 1, 1884, with permission to apply to the Adjutant-General of the Army, through Division Headquarters, for an extension of three months. (S. O. 24, Headquarters' Department, Texas, Feb. 26, 1884.)

Bache, Dallas, Major and Surgeon, leave of absence extended 7 days. (Par. 1, S. O. 43, Headquarters' Department, East, March 5, 1884.)

Stephenson, William, First Lieutenant and Assistant Surgeon, ordered to Fort Niobrara, Neb, for temporary duty, on completion of which to return to his station, Fort Omaha, Neb. (Par. 4, S. O. 20, Headquarters' Department, Platte, March 3, 1884.)

Fisher, Walter W. R., First Lieutenant and Assistant Surgeon, assigned to duty at the Presidio of San Francisco, Cal., from 18th inst.

Polhemus, A. S., First Lieutenant and Assistant Surgeon, assigned to duty at Fort Winfield Scott, Cal., from 18th inst. (S. O. 23, Par. 1 and 2, Headquarters' Department, Cal., Feb. 21, 1884.)

Phillips, John L., First Lieutenant and Assistant Surgeon, assigned to temporary duty at Fort Warren, Mass. (Par. 2, S. O. 39, Headquarters' Department, East, Feb 28, 1884.)

Benham, R. B., First Lieutenant and Assistant Surgeon, relieved from duty at Fort A. Lincoln, D. T., and ordered to Fort Sisseton, D. T. for duty. (Par. 1, S. O. 22, Headquarters' Department, Dak., Feb. 26, 1884.)

Changes in the Medical Corps of the Navy for the Week Ending March 8, 1884.

P. A. Surgeon H. E. Ames, from the "Colorado," and ordered to the Greely Relief Str. "Bear."

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THE AMERICAN MEDICAL ASSOCIATION

AND OF ITS SEVERAL SECTIONS 1883-4.

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ORIGINAL ARTICLES.

THE NEW SCIENCE OF MEDICINE.

[Being the Doctorate address delivered at the Forty-first Annual Commencement Exercises of Rush Medical College, February 19, 1884.]

BY NORMAN BRIDGE, M.D., PROFESSOR OF HYGIENE AND ADJUNCT PROFESSOR OF THE PRACTICE OF MEDICINE IN RUSH MEDICAL COLLEGE.

Graduation day is an epoch in the life of a man. To the reflecting mind it is crowded with suggestions for thought, while to many it is full of the romantic and of castles in the air. To all who graduate this thought comes, that the world still has for us subjects for study, which, up to this point, we have been unable to touch.

The undergraduate's experience in a medical college is sober and fatiguing. In acquiring the medical degree we have studied the science and art of medicine as represented in certain books; by means of lectures and quizzes, by laboratory exercises and practical work; and by the observation and contact of the sick. So far our work has been one of preparation in a very direct and practical way for a particular present object and for a larger ulterior purpose in the labor of life.

Necessarily many subjects of great interest and quite essential to the fully equipped man have been neglected. One of these is the history of medicine.

The several branches of medicine and surgery have been given to us out of condensed text books or out of the mouths of teachers, and as to portions of them, whether they are new or old, we might often be in doubt.

Both the text-books and the teacher have been obliged to be, in the main, silent as to when and where all this mass of facts became known, how the science grew and developed; where it came from: whether it did not, some of it, drop down from the clouds full grown.

No one can even approach the study of the history of medicine, without being forcibly impressed by the great number of differing views and theories that have been held in the past.

Even before our pupilage began we knew—no observing person fails to know—that doctors disagree, and that there have been so-called schools or sects of medicine for a very long time. In our early studies too it was a perplexity to our minds how there could be so much disagreement and yet any truth or foundation facts in medicine at all. And we may have been even worried by some lack of agreement among the faculty who taught us.

It is only by mental growth that we appreciate fully that on every subject on which men think there are and must be various opinions. Men thoroughly agree on no subject that seriously engages their study. This is a fact in the history of thought and in the composition and physiology of the mind. Brains and minds differing, men who think must disagree more or less. Religion, politics and all the arts and sciences have, since the beginning of history, been perpetual examples of this truth.

When a man reaches the serene belief that his views are past improvement, he ceases to reason further, and gives himself up to the exercise of faith and is happy.

There is an innate property of the mind, varying in different individuals, which manifests itself in a desire for more knowledge and better methods, both for the love of innovation and for the practical results that may follow. In a few minds among the multitude this is a dominating impulse. These are restless spirits; experimenters, innovators, who hate present ways and things, if better are possible. It is through the labor and thought of such minds that the arts and sciences and all thought have progressed through the ages.

In many directions the progress has been slow, and successive contributions have added to what already existed and a gradual moulding and a steady growth have ensued. Politics, the law and religion are examples in point. In the arts and sciences, however, progress has been made in a very different way. Here growth has been marked by occasional long strides, and a single step has often changed a science or revolutionized an art. Each great step has added something and destroyed much. The record is one long story of iconoclasm. An important discovery has often been less startling to the minds of men than the crash of cherished idols which it has caused. A new fact disturbs the foundations of existing ideas and theories and compels the recasting of a science. Thus chemistry, physiology and pathology have with fresh additions, become new sciences. The discovery of oxygen destroyed a hundred beautiful theories. The Copernican theory threw into commotion the old philosophers who saw their doctrines of the construction of the universe tottering.

The discovery of the circulation of the blood had a hard struggle, against the beliefs of the time, for recognition. It was necessary to surrender all the accumulation of alleged science with which it conflicted. This was sacrilege to the old doctors and they fought against the innovation, automatically. Every discovery that has run against any long held notions has encountered the same mental automatism on the part of those who ought to welcome every new truth. But with hesitation and haltings, and in the face of difficulties, progress has been made, step by step, in all sciences, and not least in that of medicine.

Of old, when medicine was mostly theory and hypothesis, all the doctors naturally ranged themselves into sects and schools, each held together by some dogma. As the inductive method of study came into vogue gradually the sects became fewer, till now they have, among the real students, nearly disappeared.

The schools, as well as the laity, have thought they found it necessary to designate by some name the students of medicine who, since they study this as they would any other science, can belong to no sect. As these are of the race of the seekers after demonstrable truth through all time, they have been called the "*old school.*" Physicians who believe the science of medicine is too broad and grand to be labeled by the name of a sect, are continually referred to as the "old school," as though they must be ancient in thought and practice—the very type of fossilization.

But the public is not alone in confusing the profession of to-day with that of a period long past. Many within the profession are unable to free themselves from the notion that they belong to some ancient order, in thought as well as name. They worship the past. Writers of medical books affect erudition by a familiarity with the medicine of the ancients, and quote what Hippocrates and Galen believed on a particular point, as though it was of the smallest practical consequence to us what they believed. We all regard with pride the honorable position of our profession at times in the past, and applaud its fidelity to the cardinal principles of ethics. We point to the oath of Hippocrates and say: "behold what manner of man the physician was before the Christian era." For more than twenty centuries the rules of conduct of our guild have not changed.

But human nature and weaknesses are the same in all ages, and the principles of ethics endure forever. Plato and Emerson sang the same song, only in different tongues and to different listeners.

The glory of the ancient profession is that it did grope after truth, and that it was loyal to the ethics of all time and loyal to the sick. The few facts of science which the ancient doctors gathered are but a handful to the harvest of this later day, while their errors about disease and their good-intentioned, but awful inflictions upon the sick for their supposed benefit, make a chapter that is positively sickening to contemplate. Volumes have been written to show the wisdom and knowledge of the ancient profession. I ask you to-day to contemplate how much of the science of medicine is the product of the closing century.

I would not say a word to lessen the glory of the early profession for its actual attainment and work. But it is a fact that the science of medicine as an agency that actively and forcefully aids mankind to live longer, with more comfort and less pain, and to recover from disease, is new. A hundred years ago the circulation of the blood had been known more than a century. Gross anatomy was well understood; this study had been advanced to a laudable degree. A few of the drugs of that day are among the most valuable in our materia medica, but most of them have long since fallen into neglect, and the few had not been studied systematically or scientifically as to their action.

When the idea originated that a substance to be medicinal must be disgusting I do not know, but it was early in the history of medicine. For the ancients vied with each other in search of things horrible to be called medicine. Down to the eighteenth century, in acknowledged use were the teeth of boars; the jawbones of fishes; powders of blood from various animals; excrements of animals and people; flesh of human beings and animals, and from particular parts of the body for particular diseases.

The appearances and symptoms of many diseases were well described many centuries ago. Ignorant of pathology, the ancients had devoted the most patient study to symptoms, and in this particular some of their descriptions are masterpieces.

The practice of medicine in early times was based almost entirely upon absurd theories of the nature of disease. Disease was due to the astral influence of the planets, Saturn, Jupiter and Mars. Or it was a depraved condition of the humors, called cacochymia—a humoral pathology that was like the play of fancy to children. Another theory was that all diseases had their origin in the soul.

The doctors were divided into contending sects, each of which generally had a single potion or measure of treatment, which was its only resource. One sect tried to cure all complaints by cataplasms; with another wine was the only remedy; plasters and ointments constituted the armamentarium of another; a fourth used oils and wool externally, various potions internally, and charms generally; while a fifth are said, by way of contrast, to have been "ignorant practitioners" and "silly old women." But, as already shown, it is not possible to break away entirely from what we are pleased to call the delusions of the ancients. Mental tendencies were the same a thousand years ago as now, and promise to remain the same through all time, and nothing shows this more than that men *tend* to think and believe in the same fashion in all ages. Thus a great and learned physician of the fifth century recommends for epilepsy a charm consisting of the nail taken from the arm of a malefactor who had been crucified. To cure a stye, "the points of nine barleycorns were to be rubbed upon the part," and on each application were to be uttered the words, "*Fuge, fuge, Koithe se diokis.*" But if the stye was on the right eye it was to be rubbed with three fingers of the left hand, three

times the patient was to spit, and three times to utter: "*Nec mula porit, nec lapis lanam fert,*" etc. The educated "veteran leader" of a modern sect of physicians, writing less than ten years ago, says that in typhoid fever, if a patient desires to get out of bed, give him bryonia; if to change beds, arsenicum; if to escape from bed, belladonna; if to jump out of bed, hyoscyamus; but if he springs up from bed suddenly he must have bel. and nux. For "pain in the joint of the lower jaw give baptesia; for dropping of the jaw, luchnau; for falling of the jaw, arsenicum; for hanging of the jaw, lycopodium, mur. ac., etc.; and for sunken jaw give secale." Thus the fifth century and now![1]

Medicine, as a consistent, coherent science, could not exist till the nature and composition of substances could be intelligently studied and the minute structure of bodies explored. It had been patiently waiting for two aids, the key to the science of chemistry and the means of seeing the universe of the minute. One of them came a little over a century ago in the discovery of oxygen. This explained a thousand problems, opened a vast field for research, and was the key to the chemistry of the animal body. The atomic theory came naturally after the discovery of oxygen, and from this point chemistry made rapid growth. Chemistry is so vital a part of our medical science that it may truly be said that without it the science of medicine of to-day would be non-existent; nor will it do to compare modern chemistry with ancient chemistry. The ancients had no chemistry. Modern chemistry is all there is, and it can only be contrasted with the midnight darkness of the days of alchemy.

The gross anatomy of the eighteenth century had left little to be added in that direction. But the minute anatomy of the human body, of animals and plants, was well-nigh a sealed book. This field was waiting for the perfection of the microscope, and this instrument, for effective use, may almost be said to have been born in the present century.

The medicine of to-day depends upon histology, and the microscope was the road and the way to this study.

Take away from medicine the achievements of the microscope, and we should lose our knowledge of the structure of the tissues, the function and behavior of the cell in all its manifold forms, mutations, and migrations; the vast subject of cellular pathology; all the parasites and parasitic affections; the history and behavior of the micro-organisms of disease, and many other quite as vital parts of the science.

Within the century our knowledge of nearly every disease of common occurrence has been greatly enlarged by microscopical and chemical study of the organs involved, and their products, and by comparison with conditions of health.

Before the microscope we were in deep ignorance of nearly all the diseases of the kidneys, and of many disorders and symptoms which they produce. The discovery by Dr. Bright of the true nature of some of the disorders known by his name, and other discoveries in the same direction, have given us a fair insight into the diseases of these organs.

The present practice for the relief of these maladies is all based on recent discoveries. None of it is ancient, or even old. By practical hygiene, another modern department of medicine, many cases of Bright's Disease are relieved or held in dormancy for years.

A century ago, typhoid fever was confounded with several totally different affections, one of which was the contagious and very fatal typhus fever. Now it is established that typhoid fever is not contagious at all; that it is a disease of the intestines, and that it runs its course as regularly as does small-pox, in the main, regardless of treatment.

With the better understanding of this disease has come treatment that is more rational and more successful. Formerly the mortality was very high; forty years ago it was probably 18 to 20 per cent. of the cases. Now the per cent. of deaths is 10 to 12.

More than fifty parasites attack the human body. Each variety produces symptoms which we call a disease. Nearly all the knowledge we have of the parasites and of the symptoms has been acquired since the advent of the microscope, and is thus thoroughly modern.

The sickness produced by the trichina spiralis has existed for two centuries—probably much longer. It was confounded with typhus fever; it was called dropsy, epidemic erythema, epidemic œdema, and other names quite as unintelligible. Twenty years ago the microscope swept away the fog, and we behold a little worm coiled up in a muscle. Following closely upon this discovery came, most naturally, the annunciation: Cook your pork in every part, and no trichiniasis. In the study of other parasitic diseases, quite as much progress has been made as in this.

Almost the whole of the now most formidable department of cutaneous medicine—which deals largely with these parasites—is the growth of the present century. It could not be the product of a time before the microscope.

The achievement with which the century began was the discovery of vaccination.

In every civilized community the world over it has entirely changed the practice as to the *variolous* diseases. Its benefits have been incalculable. Although attacked by all shades of fanatics, it has saved and is destined to save thousands of lives, and it has relieved mankind from measureless anxiety and regret.

Near the middle of the century artificial anæsthesia was accomplished, by the use of nitrous oxide, ether, and chloroform.

This must remain through all time a marvel of discovery and invention. That it is possible to produce such a phenomenon as anæsthesia artificially is a marvel, and it is amazing that, being possible, the means for its easy, controllable and safe accomplishment should have been found. The lessening of suffering and the saving of life which this discovery has induced have been the talk of a generation. Not only is the current practice of surgery and medicine adapted to the use of anæsthesia, but, what is frequently overlooked, anæsthesia has broadened the

[1] Russell, p. 96.

field of operative surgery, by making many operations possible which without it could never be made.

Hygiene or sanitary science, the most beneficent in saving life, and in prolonging it the most potent, is a thing of comparatively recent years. It is a new revelation. Most of its facts and laws are the fruit of years that living men remember.

It has reduced the danger of death from certain diseases; with it alone certain diseases, formerly thought dangerous, are self-limited and without danger, and it has caused the average human life to increase in length.

Through organized efforts in society it has lessened the ravages of epidemics in many cases, and warded them off in others.

Never before did it enter so intimately and so thoroughly into the daily practice of the doctor as it does now.

If there is a single feature that, more than another, distinguishes the practice of the present from that of a former time, it is the use of numerous instruments of precision. Nearly all these instruments are the product of the present period.

The stethoscope and plexímeter, and the use of them in auscultation and percussion, are all modern, and these methods of study of the diseases and conditions of the thorax and abdomen are now everywhere used. Nobody now even professes to prescribe intelligently for diseases of the chest without the aid of auscultation and percussion.

The clinical thermometer was known three centuries ago. It was neglected till about ninety years since, and has of late grown into such favor that now it is used by the profession almost without exception. Whether it is of as much value as is claimed may well be questioned, but it has grown into the methods of thought and into the literature of the profession to such a degree that now no man would think of reporting a case of acute sickness for a first-class medical journal without giving the records of the thermometer.

The ophthalmoscope, invented a few years ago for the study of diseases of the eye, and now quite indispensable in that branch of work, has overstepped its original field, and is fast coming to be indispensable in any thorough study of diseases of the brain.

The diseases of the ear cannot now be diagnosed without the otoscope, yet this instrument is not fifty years old.

The laryngoscope and rhinoscope are the newest of modern inventions, and have made a new art of the treatment of the larynx and nasal cavity.

The hypodermic syringe as an instrument of exploration is emphatically one of precision, and it is refreshing to see it coming into vogue in this direction.

The dynamometer and æsthesiometer are in daily use, while we have to aid us as occasion demands; the sphygmograph and the cardiograph, the thoracometer, stethograph, spirometer and pneumatometer, the hæmacytometer, the perimeter, the palorimeter, the sacchorimeter, and never to be omitted, the urinometer, the test-tube, and the microscope, to say nothing of a half dozen others occasionally used, and a multitude of specula for exploration of the internal organs of the body.

Hypodermic medication has come into general use within our own memory, and now nearly every practitioner carries his hypodermic syringe. It enables him often to give relief and comfort more promptly and surely than by other methods, and it has enlarged the field of his resources, for it frequently happens that by this means he can give a remedy and save a life when all other expedients have failed.

In 1850 and afterward, Dr. Bowditch, of Boston, compelled the profession to believe, what they believed with reluctance, that serum and pus in the thoracic cavity may be safely evacuated. He employed for the purpose a trocar and tube to which was attached a pump. This we have amplified in the aspirator of to-day, which is extensively used for evacuating fluid from all sorts of natural and unnatural cavities to the saving of manifold valuable lives. Few instruments ever invented have in the same time had the fortune to accomplish so much for good, while doing so little harm, as this.

The expression, abdominal surgery, has a meaning that is entirely modern.

To have learned that the abdominal cavity may be opened with comparative safety, and to have done ovariotomy thousands of times, as well as other formidable operations upon the abdomen, with a large majority of successful results, would appear to be glory enough for a century. But the splendor of the achievement cannot be appreciated till we attempt to compute the saving of life in years. It was probably fully ten years ago that the scholarly Peaslee wrote these words: "It may be shown that in the United States and Great Britain alone, ovariotomy has, within the last 30 years, directly or indirectly, contributed more than 30,000 years to the active life of woman, all of which would have been lost had ovariotomy never been performed." And it reads like a fairy tale or the story of a dream that Keith, of Edinburgh, has done this operation a hundred times successively with only three deaths, and more than sixty times successively without a fatal case.

Before the modern period, the reduction of some of the more formidable dislocations was clumsy, difficult and often barbarous. The surgeon, with his retinue of robust assistants and his block and tackle for multiplying power, as he went to a case of this kind, suggested a gathering in the olden time for raising the timbers of a building. The tackle and block were used for pulling the joint into place, and the performance resembled a refined form of ancient torture by which the victim was torn asunder.

Now, by the simple and rational method of manipulation these dislocations are reduced by the easy movement of the surgeon's hands, without ado, without pulleys, and without torture:

Two pictures are brought to my mind vividly by this topic—one of childhood, the other of the present. The first is the picture of an aged and beloved woman who had sustained an injury of the hip. Just the nature of the lesion was uncertain, but it was recent, and she received the delicate attentions of the

pulleys for an hour or more without anæsthesia, when, from sheer pity, those responsible for her, begged that she be allowed to die if she must without being rent in twain. She was a cripple the few remaining years of her life.

The other picture is of an humble woman here in Chicago, and of her eloquent tribute to rational surgery. Her ehild had received some injury of one of its bones. She sent for a surgeon. It was night; and he returned word that she must call some other doctor. Again she sent, begging him to come; again he refused. She did not call another attendant, but watched by her charge till daylight, and then made her way to the surgeon's house, and with ineffable pathos begged him "for the love o' God" to come to her child. Prompted by curiosity, he asked her to tell him why she had allowed her child to go unattended all night rather than call another surgeon? "When I was a girl," said she, "I saw enough of common doctors for bones. My poor father put out his hip, and the doctors came and nearly killed him a pulling him with ropes all night, and then could not set it. In the morning a doctor o' the name o' Brainard came. I s'pose you never heard of him; he died a long time ago, but he was a great surgent, and he took the leg in his hands and turned it first one way and then the other, and so easy all the time, and it just went in with a snap."

In the departments of ophthalmology and otology the most remarkable advances have been made within fifty years.

Till the invention of the ophthalmoscope by Helmholz there was only a misty sort of knowledge of the diseases of the inside of the eye, and it was impossible to diagnose any of them. Now their discovery is easy and certain.

The subject of errors of refraction and their corrections has, chiefly by the labors of Donders, been placed on a "basis of mathematical demonstration" that seems unlikely to be disturbed by future researches.

No branch of medicine has grown more in favor and usefulness in a hundred years than dentistry. Preservation of the teeth has come to be almost synonymous with preservation of health, and the converse is strictly true, no good health with bad teeth. Dentistry is all modern; it cannot even plead age for the sake of respectability.

Antiseptic surgery is the last great achievement and the present wonder of medicine. It is all so recent and fresh in the minds of all students that either a description of it, or extended reference to its advantages, is not called for here. To a friend who, a few weeks ago, visited Prof. Nussbaum of Munich, the latter said, that during the forty years preceding 1876, at all times there was pyæmia in the Hospital of Munich, and during 1875, of the surgical cases 87 per cent. had hospital gangrene, and a large percentage died. From the introduction of antiseptic surgery in 1876, they have not had a case of gangrene, and pyæmia is almost unknown.

Dr. Weir, of New York, only last month called attention anew to the fact, that formerly the mortality from compound fractures was from 26 to 60 per cent. Now, by antiseptic management, the death rate from these injuries is reduced to 6 per cent., and by some surgeons this figure is even lowered.

Litholapaxy is a surgical procedure, introduced very recently by Prof. Bigelow of Boston, which threatens to supersede other methods of dealing with vesical calculus.

Bloodless surgery is another new realization whereby, with the rubber bandage, the surgeon is enabled to do many operations more easily, quickly, and successfully than formerly, as well as to avoid the loss of blood.

More different splints and appliances than could be named in an hour have, within my memory, been invented for the purpose of giving comfort to surgical patients and efficiency to their treatment.

One of the most beneficient and humane departments of surgery is that which deals with deformities of the body. Orthopædic surgery has hardly attained its majority in years, but it has accomplished a work in the relief of the crippled, and correction of deformities, as well as in the saving of life, that deserves the perpetual gratitude of mankind.

Electro-therapeutics is each year more and more becoming a recognized and necessary aid in the practice of medicine and surgery. Of course it is not new, but its recognition as having a legitimate field of usefulness, and the careful survey of that field, are the work of the last thirty years. In the hands of the profession it is, then, a new science.

The practice of medicine and surgery was never before on so rational a basis as it is now. Never before were practitioners so careful to do those things for the sick that are known to be helpful, and to refrain from everything else. Meddlesome practice—which means unnecessary, if not harmful practice—was never in such disfavor as it is to-day, to the unutterable gain of suffering humanity.

The most common condition of sickness that physicians are called to is that of fever. The modern methods of treating this state differ from the old very widely, in ministering more to the comfort of the patients, in attempts to reduce excessive heat, and in the free use of water for both of these purposes.

It is a recent discovery—and one made possible by modern means of investigation—that high temperature alone is a source of danger to the tissues, and puts the patient in peril if long continued. By various means, only lately well established, most high temperatures may be reduced without harm, and usually without discomfort, and by these methods the mortality from febrile diseases is perceptibly lessened.

Rest of the disordered organs, now rapidly growing in favor, as a systematic process in treatment to be emphasized, is quite new. Modern methods enable us to know much more exactly than formerly the organs diseased, and physiological chemistry and mechanical ingenuity have put us in possession of means not previously known whereby the labor of an organ may be dispensed with.

Now, dyspepsia, inflammation of the stomach, intestines, lungs, pleura and liver, Bright's Disease, typhoid fever, all the results of injury and many other

conditions of sickness are powerfully alleviated by this process.

How to put the sick part at rest as far as is possible, and cause the other organs of the body to still carry on the processes of life with the diseased organs out of duty, is a new art, as it is a very grand one.

Within a century a multitude of medicinal agents now in constant use, have either been discovered or come into favor for purposes that are new. Quite as many have been consigned to forgetfulness. Quinine, ether, chloroform, chloral, salicylic acid, ipecacuanha, the bromides, cannabis indica, carbolic acid, iodoform, corrosive sublimate, podophyllin, jequirity, duboisia, eserine, nitrite of amyl, veratrum viride, aconite and ergot, with a hundred more have swelled the resources of the art.

Probably in the choice of medicines on which to rely the profession has not always been wise, but the choice has been made, and fixes on the therapeutics of the day the stamp of newness.

In many more directions than I have cited may medicine, as it is now practiced, be shown to be modern. In science it is recent, in methods it is new. Verily it is a new profession into which you, gentlemen, have to-day been inducted.

Let it not be inferred from these laudations of the work of this century that we have occasion to rest or be satisfied. There is a great, undiscovered country in science. That misty domain holds a thousand secrets of the cause, nature and remedy of disease. The whole class of zymotic diseases, often now referred to as preventable diseases, because, I suppose, we *ought* to be able to prevent them, and many others which cut us off early and refuse to let us die of old age—all these have waited long and still wait a solution.

Medical education partakes of the spirit of progress and is modern. It differs widely now from what it was formerly. Among us the change has been greater than in the older countries. There innovations come slowly, but change has come everywhere. Of old the writings on medicine were all in Latin. Every liberally educated physician was obliged to spend years in study to become able to read and write this language readily. The literary was the major part of his education; it was the least useful directly, and it took the place of science. Science was poor in facts worth knowing, and yet the student must learn a new language before he could read the little of science there was. No northern tongue was fit to be the bearer of such knowledge. Now we reverse the order. Science is rich and nothing can usurp her place; any language is fit to convey her treasures to us, and it is wastefulness of human energy and time to learn science by a hard method and a rugged road when there are easier ways.

Literary studies are only blessed tools and instruments. I know a great discussion of the last decade in this country has been medical education, and that there are plentiful complaints that it is defective. Both in and out of the profession the question has been widely agitated, and the complaints are, many of them, just. The standard ought to be raised, particularly in the matter of study and drill preparatory to the medical college course. The medical course itself ought to be improved by the addition of more practical work and observations.

The agitation has provoked an improvement, so that to-day the curricula and requirements of the best colleges in this country are higher than they were ten years ago. But the claim that because the undergraduate period of the last century was longer than ours, therefore these modern times have fallen into degeneracy, is not good. The educational methods of the ancients can be no guide for us. With them the term of study was long by reason of the literary incubus already referred to. There never was a time before when so much of the *science* of medicine was taught and learned during the undergraduate period as now.

The medical heroes of antiquity wrote medical books by the hundred. Beyond the anatomy and some descriptions of disease, they are most of them as truly rubbish as the stories of the alchemists—to be read by those who have the leisure as historical curiosities. In a single term of college now, a student learns more of the essential science of medicine than all the medical tomes of antiquity contain.

Bad as our course of study may be, if a long course was ever exchanged for a short one to the unspeakable advantage of everybody concerned, it was in this instance.

As to the course of study in your Alma Mater, she does not pretend that it is perfect; she does not believe any course can be perfect, and therefore does not even undertake to establish one that will be permanent and not change. In the past her course of study has changed, and it will doubtless change in the future, as the needs of the public and the profession seem to require.

The college has had in your behalf a higher purpose than merely to have you earn and receive the degree of Doctor of Medicine. She has worked, and wished, and hoped, and hopes to-day that you may become good practitioners and successful men. Hence the course of instruction has been practical in the extreme. It has been shorn of speculation and confined to demonstrated paths as far as possible, and it may have been barren of some fascinations on this account. But, mindful that the consummation of our efforts is to be useful doctors, and therefore true servants of the public and proper professional men, it has been the constant purpose of Rush College to make her courses of study contribute to this end. The experience of her alumni has completely vindicated this position. Scattered over many States and Territories of the Union, and in other lands, your fellow alumni have met with a success as physicians and surgeons that is phenomenal. No higher test of usefulness than this can be possible.

May the class of 1884 add to the honor and high standing of the alumni of the college! You, gentlemen, have as a class a peculiar responsibility, for, measured by the usual standards, your Alma Mater has found that your aggregate of attainments is higher than that of any recently preceding class. Cultivate a pride in your classes, in all that is best in the profession. Create for yourselves an ideal, and strive to

realize it in your lives. Let a few qualifications and adornments be indispensable. Your ideal is a constant student; his life at college has only intensified his ambition to study. He can observe a phenomenon himself and know it as well and truly as though he read of it in a book. Fertile in resources, he is never surprised or disconcerted. He is patient, attentive, and upright in his intercourse with his patients. He is a student outside of the field of medicine; a lover of literature and all the ennobling arts; a many-sided man, indeed. The public know him, not only as the highest type of good breeding, but as one who, throughout the years of life, is steadfast in rectitude and immovable in a high purpose; who is exemplary in industry and patient in waiting.

Such an ideal is possible, and it is possible for you to realize it.

TREATMENT OF RINGWORM WITHOUT EPILATION.

A CLINIC BY JOHN V. SHOEMAKER, M.D., IN THE PHILADELPHIA HOSPITAL FOR SKIN DISEASES.

[Reported by Charles S. Means, M.D.]

GENTLEMEN:—At the close of the last clinic, I pointed out to you the circular patches on the heads of these three children. The girl has two spots, the younger boy one, and the scalp of the older boy is entirely involved. The appearance and symptoms of these patches, together with the cause of their development, the pathological changes which had taken place in the hairs, their follicles and the skin, as well as the diagnosis, all received due consideration.

Before proceeding to the treatment of these patients, let me again recall the appearance of the fungus of this disease—the trichophyton in the specimens beneath the class microscopes, which will again be passed around for your inspection. Beneath the first microscope you will again see a hair filled with this growth, and under the second and third instruments are sections of the skin, showing how the epidermis, as well as the hair follicles deep down, are also invaded. The hair in the first specimen was taken from the acute case of the young girl, while the sections of skin in the other two were made from the older boy, having the ringworm for the last four years. Now that I have recalled an important part of this affection, the removal and thorough destruction of the parasite which has brought about these lesions should command our attention. In beginning the treatment these children should, if possible, be isolated, in order to prevent them from spreading the contagion. Constitutional treatment should next be administered, as the experience of several years has taught me that care and attention to the general system is a great factor in bringing about a more speedy change with topical remedies. Proper hygienic surroundings and the use of good, nutritious food are essential and necessary for their systemic effect. As the first two cases appear to lack nourishment, the following tonic and nutritious combination will no doubt be very advantageous: Compound syrup of the phosphates and the fluid extract of malt, two ounces of each, mix; two teaspoonfuls in water three times daily, after meals. In the third case, the boy is especially anæmic, and will respond to treatment much better by using one of the salts of iron internally. A most excellent preparation, particularly well borne by children, is the syrup of the lactate of iron, which will be ordered in two teaspoonful doses after meals. It is also of equal importance that the local treatment should be carefully and persistently carried out.

The failure of many local remedies to act is due often to the negligence and careless manner in which they are used by patients and attendants. Special apparel, towels, bed linen, combs and brushes, should be used, provided they can be obtained by these patients. During and after the treatment every thing used by the patient should be thoroughly cleansed by an anti-parasitic remedy. The hairs upon and around the diseased patches should never be disturbed either by cutting, shaving, epilating or endeavoring to extract them. I desire to refer especially to these points, which I have again and again dwelt upon for some years in my clinics, in the treatment of all vegetable parasitic affections of the skin.

While cutting the hair in this girl's case might expose more of the diseased surface, yet it would also make the hair shafts shorter, and the movement of applications over these short hairs will often add to the irritation. It will be no especial advantage to cut the hair to expose the diseased surface, as the same purpose can be accomplished by separating the hairs and making the application. Shaving the hair is for the same reason a disadvantage, and will often cause cuts and abrasions of the skin which will increase the ravages of the parasite. Epilation is even more useless, and is painful and tedious to perform. I have ceased to resort to it, and find that vegetable parasitic affections improve much better without it. I believe I was the first to treat ringworm and other parasitic diseases of the same class *without epilation*. I commenced my new departure from the old method of extracting the hair laid down in all the text-books some years ago in a discussion before the Philadelphia County Medical Society, which can be found in the proceedings published by that organization. Look at those microscopic specimens now passing around the class, see how the hair and follicles are invaded with the fungus growth, and tell me if you could successfully extract such diseased hairs. The fungus has made the hairs brittle, and they will break off upon an attempt to extract them either on the surface or beneath in the follicle. The diseased hair or a part of it remains, and the parasite continues its ravages, even more active, owing to the irritation set up by an attempt to remove the hair. The wisest and best course in all cases will be to leave the hair undisturbed.

I will recommend that the heads of these children be washed every day or two with the following antiparasitic mixture: One ounce and a half each of

sulphuric ether and alcohol, with ten grains of thymol. Another good remedy to use in place of the latter in the same mixture is boracic acid, or dilute sulphurous acid alone can be sponged over the parts once in two days. Cleanliness can be carried out perfectly by using one or the other of the preparations just enumerated. I would advise that no water be applied to these patches until all evidence of the disease has disappeared. Water applied to the surface of the skin places the organic carbon compounds in a more favorable state for the nutrition of the parasite. In addition to the mixture just mentioned to keep the parts clean, I will order for the first and second cases the copper oleate ointment in the proportion of thirty grains of the salt, to one half an ounce of recent lard. The patches should be rubbed two or three times a day with this ointment until all evidence of the disease has disappeared, and the parasite cannot be detected by the microscope. This remedy, which I have used very largely and successfully, was reported two years ago for the first time in a paper to the Pennsylvania State Medical Society. It has the power not only of destroying the parasite upon the surface, but also deep down in the follicle.

In the third case, the boy having the ringworm over the entire scalp, which is covered with abrasions and deep infiltration of four years' standing, I used the mercury oleate ointment; 20 per cent. has been used for the past six days with great benefit to the parts. The same application will be continued; the attendant being instructed to rub in the half an ounce of 20 per cent. mercury oleate ointment every day. The latter remedy has been selected in order to lessen the great infiltration of the parts, as well as to destroy the vegetable parasite. You need not fear to use such a large quantity of strong mercury oleate ointment. I have and am now applying this oleate in even a larger quantity and a stronger per cent. over the scalp in ringworm and upon the general surface of the skin, without the least untoward effect. I have yet to see with the use of the mercury oleate ointment the first case of salivation.

BACKWARD TRACTION IN TREATMENT OF CARIES OF THE SPINE.

BY CHARLES F. STILLMAN, M.D., NEW YORK.

MR. EDITOR.—I thought you might be interested in some medical matters which sometimes occur in New Jersey. Therefore I send you a partial report of the transactions of the Hudson County District Medical Society, held in Jersey City March 4, 1884. After the regular business was completed, Dr. Charles F. Stillman, of New York, who had been previously invited, delivered a scientific and interesting lecture upon "Backward Traction in the Treatment of Caries of the Spine," illustrated by clinical material.

Dr. Stillman prefaced his lecture by describing the various methods of treatment in general use and classifying them according to the principles upon which they are founded. These are, 1st, simple Fixation; 2nd, Symmetrical Traction, which included the principles of suspension and application of the plaster jacket, and 3rd, Backward Traction, upon which he dwelt more at length.

The origin of this principle, which consists in curving the spine slightly backward, so that the bodies of the vertebrae are relieved of superincumbent weight, which is transferred to the posterior process, was ascribed to Dr. H. G. Davis, although the first effective instrument was devised by Dr. Taylor. A later instrument was invented by Mr. Chance, of London, and has lately been much advocated by Noble Smith, but the application of the principle in all of these braces was defective. In each the bending point of the spine, if the patient leaned forward, was still at the seat of disease, so that great strength on the part of the apparatus was required to successfully oppose the bending

Dr. Stillman advocated a new form of *lever* brace, which completely overcomes this tendency, and gives *fixation*, *backward traction*, and *forward pressure* at the seat of disease, these being the three indications necessary to successful mechanical treatment. The principle on which they were founded was illustrated by placing patients with well marked kyphrotic knuckles, face upward, upon a padded table so placed that the head and upper extremities were allowed to hang over the edge upon which rested the kyphos. In this manner the weight of the head and upper extremities produced backward traction upon the spine, causing an extension at the seat of disease, the result being seen in a diminution of the knuckle angle. By this method the superincumbent weight which caused the knuckle to form was thus used as a traction agent for its reduction.

If the disease was in the dorsal region, the short arm of the lever extended from the site of the disease to the sacrum, and the long arm from the neck to the sacrum, the two being connected at the sacrum by an adjustable clamp which fastened them together in the form of a V. The force was thus so graduated that if leaning forward was attempted the shorter arms of the lever pressed firmly upon the parts adjacent to the knuckle and exerted forward pressure, which prevented the spine from yielding at the seat of disease. Dr. Stillman claimed that in no other brace known was this accomplished, and for the dorsal region it secures a much greater degree of fixation than any of the braces or splints in use. If the lumbar region be involved, the short arm of the lever passes from the diseased part to the second dorsal vertebræ, and the long arm from the sacrum to the second dorsal vertebræ. They are secured together opposite this point by an adjustable clamp and connected to the trunk by a T plate in front which allows the brace to be tightly strapped to the dorsal portion of the spine without exerting injurious pressure upon the arms or chest.

The effects of these braces could not be changed by alteration of position in the patient, as the peculiar action of the lever is automatic and compensatory.

Cases were shown and braces applied to patients, the demonstration being complete and satisfactory.

After Dr. Stillman's interesting and very able discourse the subject was open for discussion by the members of the society. Dr. Paul remarked that he had been greatly profited by Dr. Stillman's interesting and practical discourse; especially in the exhibition and application of the various kinds of mechanical appliances for the cure of caries of the spinal column, and hoped he would have the pleasure of hearing the gentleman again at some future time.

Dr. Quimby remarked that there were many interesting, and some novel ideas advanced by Prof. Stillman in his treatment of spinal caries. The great number of different mechanical appliances exhibited only goes to show how difficult is the treatment of this serious disease, with its accompanying deformities. Dr. Quimby observed that he thought the general practitioner, and even the specialist, in the treatment of this disease, did not always exercise a sufficient amount of caution in the use of mechanical appliances, and did not sufficiently guard against the use of too much pressure. He had seen several cases in which great damage had been done by the use of too much long-continued pressure. We should ever remember that we are operating on a formative being, whose tissues are soft and yielding.

After Dr. Quimby's remarks, a vote of thanks was passed to Dr. Stillman for his very interesting and instructive lecture.

J. A. Exton, M.D.,
Sec. H. D. Med. Soc.

Arlington, N. J., March 10, 1884.

MEDICAL PROGRESS.

SURGERY.

The Operation of Estlander (Thoracoplasty).—Dr. Bouilly (*Bulletins et Mémoires de la Socéité de Chirurgie de Paris*), having presented before the Société de Chirurgie a patient who, having suffered from chronic empyema, with a pleuro-cutaneous fistula of five years standing, was relieved by the resection of a portion of the sixth and seventh ribs. M. Paul Berger gave a very full and detailed report upon this operation of Estlander's, this thoracoplasty. The report embraces the details of five cases which illustrate fully the mode of treatment, after which Berger proceeds to discuss the operation itself, and the previous modes of handling chest wounds, which led to the establishment of this mode. Resection of the walls of the chest for the more thorough evacuation of pus and for the application of remedies to the cavity has been long practised; but the object which Estlander has in view in his operation is to assist in the work of spontaneous obliteration which results from the traction that the pleuritic adhesions exercise on the thoracic walls, and in the effacing of the corresponding side of the chest, and the narrowing of the intercostal spaces. This produces a gradual obliteration of the suppurating cavity and occlusion of the fistulæ, which are consecutive to the incision in empyema. This process is limited by the form and resistance of the costal arches, so that the application of the lung against the parietal surface of the pleura is subordinated to the force and extent of the adhesions which have fixed that organ in the abnormal situation where the pleural discharge has taken place. So that in cases of empyema, where the discharge is abundant, where the opening and evacuation of pus has been made late in the disease, and at a time when the mobility and flexibility of the sides are at their minimum, the incision made to evacuate the pus would frequently result in a permanent pleural fistula; this in turn leads to amyloid degeneration or to tuberculosis. To relieve this, Estlander, by submitting the costal walls to a loss of substance, produces a certain degree of sinking in, which allows of the contact of the parietal and visceral layers of the pleuræ.

The position selected for the operation depends principally upon the location of the cavity and that of the fistulous opening. The most favorable position being upon the lateral portion of the thorax on the axillary line, the intercostal spaces being there covered by the serrations of the serratus magnus. The opening, whether spontaneous or made by the surgeon's knife, nearly always corresponds to an intercostal space between the fourth and ninth ribs. The first operation for resection should be so thorough and complete as not to require a second, the osseous reparation being so rapid that a second resection presents all the difficulties of the first. If the fistulous opening is very oblique and the cavity is above it, it is simply necessary to resect a sufficient number of the ribs to correspond with the vertical dimensions of the intra-thoracic depot; if it be below, the lower ribs should be similarly resected. By reason of their connections and mechanical functions, the first two and the last two ribs are to be avoided, although Schneider performed with success a resection of the second rib and a part of the clavicle. The amount of bony structure removed depends upon the dimensions of the cavity. Sometimes, however, small cavities require a large amount of destruction of the osseous tissue. The surgeon need not hesitate to resect four, five, and six ribs, removing as much as 11 or even 13 centimeters of their substance. Of course, auscultation and percussion, and the use of the sound will limit the operation to that portion of the pleuræ provided with adhesions. The incision of the soft parts should be large, and the costal resections should be subperiosteal. The details of operating, instruments, etc., are given with much precision. The question of removal of a portion of the pleura is answered negatively, unless it be so much thickened as to interfere with the mobility of the parts. The pleural cavity is better not disturbed other than by careful washings and injections of zinc. sulph., 5 to 8 per cent., before the operation, closed by a sponge during the operation, and, if necessary, after the operation drained by a drainage tube, until retraction of the passage takes place or pus ceases to be discharged.

After the operation the thoracic wound, united by sutures, is covered by antiseptic dressings, disinfectant injections are regularly used, suppuration diminishes, the quantity of fluid used in injections becomes less, and the walls shrink together. If, at the end of six or seven weeks, on testing with a needle the spaces between the osseous fragments, a resistance is met with indicative of a rapid reformation of bone, and there is still an appreciable cavity present, the operation is imperfect and a new one will have to be performed. Considerable time must be allowed to pass before the operation can be considered as successful, and compression exercised over the chest by means of an elastic bandage facilitates greatly the healing process.

MATERIA MEDICA AND THERAPEUTICS.

A NEW PREPARATION OF MERCURY.—Dr. Sigmund Lustgarten describes (*Wiener Medizinische Wochenschrift*) a new preparation of mercury as made by him in Ludwig's laboratory, and as demonstrated in its therapeutic effects in Kaposi's clinic, which he calls hydrargyrum tannicum oxydulatum, and which is in the form of a dark-green, tasteless and odorless powder containing about 50 per cent. of mercury, that is not soluble while undecomposed; that is not readily attacked by diluted muriatic acid, but which is changed in a measure by very dilute alkalies, ammonia and alkaline carbonates, so as to form in a short time a sediment composed of extremely minute particles of mercury, the greater part of which are so small as to present under the microscope the so-called molecular movements. The question whether the alkaline secretion of the intestines is capable of performing this reduction process sufficiently to allow the superficies of the mucous membrane of the intestines to absorb this substance, as does the skin after inunction, has not before been answered with precision, until these experiments proved that the preparation passes so quickly into the circulation as to be detected within 24 hours in the urine.

The drug was given in two or three doses per day, to the amount of 0.1 gramme, and in spite of this proportionately large dose, there were no disagreeable symptoms exhibited on the part of the stomach and intestinal canal. There was neither the indigestion nor the constipation so frequently following the use of tannic acid, nor were there any of the disturbances which are generally shown after taking such preparations of mercury as are included in the calomel and sublimate groups. The same may be said with regard to salivation, as so much as six grammes have been given without stomatitis or salivation following. Up to the time of the writing of the paper 10 cases had been treated with this drug, representing pretty nearly all the grades of syphilis; the greater part were relapses, and presenting the severer and more stubborn forms, as in the papular and pustular syphilides, in which such a prompt and ready retrogression of the marked symptoms took place, as to warrant the assertion that the hydrargyrum tannicum oxydulatum is the most efficacious of the mercurial preparations known at present, inclusive of the mercurial ointment which it displaces.

GUACHAMACA A SUBSTITUTE FOR CURARE. — Dr. Gomez de la Mata, in *El Siglo Médico*, is quoted by E. Gayraud in the *Gaz. Hebd. des Sc. Med.* as describing this drug as belonging to the family of apocynies. The active principle is found particularly in the outer bark and in the different layers of the inner bark. It is used in the form of a resinous extract, which is of a sómber gray color, having the outward appearance of curare, but little soluble in water; completely insoluble in alcohol, chloroform and ether. Its reaction is that of the alkaloids in general. The marked resemblance between this substance and curare, in their physical and chemical relations, is reproduced in the physiological effects which are obtained in frogs, by injecting under the skin 10 milligr. of the watery extract. The strength of the extract varies according to the time of year; during the rainy season the juice is most abundant and at its maximum of intensity. Its effects have been studied by Schiffer and Sachs.

The differences between the action of this substance and of curare are the following:

1. The poison paralyzes all the skeletal muscles, whilst the respiratory muscles act perfectly.

2. It acts perfectly upon the nervous centers, which are affected more tardily by curare.

3. Curare, which acts in very small doses when hypodermically administered, is without action when introduced into the stomach.

Sachs observed that the ingestion of the extract of guachamaca in very small doses killed chickens and dogs. Schiffer was obliged to employ doses twenty-five times the strength of those used subcutaneously in killing rabbits.

In man it has been used hypodermically in doses of 10 milligr. of the dried extract. In one of three cases the insertion of the needle was followed by a slight phlegmonous swelling, which disappeared the next day. The specific action of the drug does not appear until forty minutes after the injection, when a sleep follows, which is light in its onset, but soon becomes more profound, and continues for two or three hours. In a robust patient, 20 years of age, who suffered from spasmodic contractions of the muscles, the sleep was natural, and on his awakening there was no heaviness or dizziness of the head. The circulation and respiration remained normal. Reflex irritability was maintained throughout sleep, but the dose was too small to produce any beneficial effect.

This drug is applicable to cases of muscular contraction, and in all diseases in which curare has been recommended. The dose is 10 to 15 milligr. in hypodermic injections.

MEDICINE.

ON THE TRANSFUSION OF BLOOD IN BRIGHT'S DISEASE.—A very interesting discussion on this subject took place January 11, at the Société Médicale des Hopitaux de Paris (*Bulletins et Mémoires*). The

subject was introduced by M. G. Dieulafoy, and was considered by M M. Dujardin Beaumetz and Albert Robin. M. Dieulafoy related two cases of hæmatophilia, one where it manifested itself through persistent and abundant epistaxis through the left nostril, and the other following the removal of a tooth. In both cases every means known to surgery was employed to check the hæmorrhage, but without avail. The conditions became alarming, and transfusion to the extent of 120 grammes of blood was practised; with the result of quickly arresting all further hæmorrhage. Here, then, a beneficial result was obtained in a dyscrasic condition, in which perhaps the structure of the smaller vessels was at fault, but in which certainly the blood did not possess its normal properties. These cases were relieved not alone in the sense that one applies oil to the empty lamp which is about to burn itself out, but the blood infused played also the part of a hæmostatic agent.

It was in studying these relations that M. Dieulafoy was led to consider the usefulness of transfusion as a therapeutic agent in such dyscrasic conditions, where the changes in the blood appear to play an important part; that is, would transfusion prove beneficial in uræmia, Bright's Disease, diabetes, acetonæmia, gout, and rheumatism? In uræmia and Bright's Disease he brought forward the details of three cases, which demonstrated that the transfusion of 100 to 120 grammes of blood was inoffensive, even when practiced in the later periods of the disease, with cardiac, renal, and pulmonary lesions; and also that the transfusion had a salutary influence upon such uræmic symptoms as the cephalalgia, vomiting, convulsions, and coma.

M. Dujardin-Beaumetz could not see in these statements any positive conclusion that the transfusion of blood could act as a curative agent in albuminuria. It is true that of late the humoral doctrine, of which Semmola is one of the strongest advocates, has been revived to account for the renal changes in this disease; but he considers that when once a renal sclerosis has been produced, transfusion could have only a temporary effect, relieving the patient for the moment, like the inhalations of oxygen, which sometimes cause the momentary disappearance of albumen from the urine. Transfusion is not only of no use except to repair losses of blood, but it is contra-indicated in all diseases where there exist organic lesions or septic blood poisoning.

M. Albert Robin discussed the part played by the blood as a hæmostatic agent in these cases of hæmophilia given by M. Deulafoy. Its action was certainly not due to renewing the blood in the vessels, for only 120 grammes were used, and possibly a less amount would have sufficed, therefore its presence must have exerted a qualitative influence.

The alteration of blood in hæmophilia is not well understood, we must admit that it consists in a peculiar modification of the plasma as shown by a diminution of the fibrine. For the precipitation of fibrinogen the intervention is necessary of a peculiar ferment belonging to the class of soluble ferments; perhaps the transfused blood remedies the insufficiency of this ferment and allows the serine to be transformed into fibrinogen, and then into fibrine, and thus restore the plasticity of the blood. According to Hazen, it is not the globules that are the active agents in transfusion, but the serum or rather the plasma, as defibrinated blood acts much less beneficially than complete blood, and the infused globules are destroyed with a variable degree of rapidity. Therefore, a minute analysis of the blood showing the amount of ferment and albuminoid substances before and after transfusion, and a comparative analysis of the blood transfused would give the chemical explanation of the effects produced.

If this test should fail, we can still apply to the question the curious facts recently made known by M. Grimaux, the influence of certain salts and their dilutions on the coagulability of albuminoid matters.

Nephritis After Varicella.—Prof. E. Henoch (*Berliner Klinische Wochenschrift*) reports four cases of varicella, in which the symptoms of nephritis supervened. The first case was that of a ten year old boy, in whom the nephritis appeared six days after the eruption of varicella manifested itself, and continued for twenty days. The second case was a two year old girl. November 13 varicella appeared with moderate fever. November 16, œdema of the eyelids and dorsum of the feet. Urine albuminous with a few tube casts and epithelium 7, 33, 1. Treatment with sweat baths, decoction of bark with pot. acet. Œdema and albuminuria diminishing. December 3, suddenly severe vomiting, collapse, cyanosis, in the evening death. Autopsy—Moderate hypertrophy and dilatation of the left ventricle, valves normal. Pulmonary œdema, fresh parenchymatous nephritis, and slight fatty degeneration of the liver. The third case was that of a five year old girl. November 10, a free eruption of varicella with fever (37, 8). November 18, œdema of the face and feet and albuminuria. Treatment by sweat baths. December 19, there were still some traces of albuminuria, the œdema had entirely disappeared. The fourth case a four year old girl. December 19, marked fever. December 20, free eruption of varicella. December 30, marked pallor of the skin and facial œdema. Headache and lumbar pains, slight fever. Urine markedly albuminous. Treatment, purgatives, Biliner water and sweat bath. January 2, face markedly œdematous, urine contains albumen, tube casts, epithelium and blood corpuscles. January 7, considerable improvement. January 13, perfect relief.

Henoch having failed to find similar cases recorded in the literature of the subject, recommends that the urine be examined in all cases of varicella, within eight days of its onset, with the expectation that many more instances of albuminuria will be developed.

Notes on Acholia.—M. V. Hanot, in the Société de Biologie (*Comptes Rendus*), referred to a case reported by him in 1881, where, in making an autopsy in a death from sclerosis of the stomach, he found a fibrous transformation of the hilum of the liver; microscopic sections

showed the ductus communis choledochus and the cystic canal to be completely obliterated, and the same was the case with the hepatic artery and its branches into the hilum. The obliteration of the portal vein was not complete, but its lumen was markedly constricted. The absence of icterus in the case could only be explained by considering that in consequence of the complete obliteration of the hepatic artery, and the incomplete obliteration of the portal vein, the biliary secretion was almost, if not completely, abolished, and the obliteration of the duct would not cause icterus, because the liver produced no bile. This then illustrates acholia in the literal sense of the word, and explains the absence of icterus in spite of the complete obliteration of the ductus communis choledochus. The atresia of the bile vessels must have progressed so gradually that it was difficult to ascertain from the clinical history of the patient, when the acholia was first established. In another case, under observation at the time of making the report, a man, 46 years of age, who has suffered from a chronic affection of the liver for the past three years, there is a complete want of color in the fæcal matters, without the slightest icterus. He presents an hypertrophy of the liver and spleen, with considerable tympanitis, but no ascites. He is weak and emaciated, but the appetite is good, and there is no indication of any serious change in the organism. There is no leucæmia, he has never had any hepatic colics or icterus, no symptoms to indicate an interference with the discharge of bile into the intestine; nevertheless there is this permanent want of color to the fæcal matters. For this condition there seems to be but one plausible hypothesis; the hepatic lesion has diminished the biliary secretion, and has more or less completely suppressed it; just as the protoplasm of the hepatic cells under certain pathological conditions increases or diminishes the quantity of glycogenic matter with reference to its normal amount, so does it increase or diminish the quantity of bile secreted. With polycholia, we have had oligocholia, and now complete acholia. Its pathogenesis remains obscure, it presents these two clinically paradoxical peculiarities:—the obliteration of the ductus choledochus without icterus; the decoloration of the fæcal matters without icterus, the biliary passages remaining permeable. It would seem as if this acholia could exist for a considerable length of time, and that it produced the marked tympanitis present from withdrawing the antiputrescible qualities of the bile.

Tamponning the Larynx to Prevent Pneumonia as a Sequence of Diphtheria.—Langenbuch of Berlin, according to Bouchet (*Paris Medical*), believes that pneumonia, which is so common in diphtheria, is always produced by the infection of the lungs through the secretions of the larynx and of the pharynx which pass into the trachea. To prevent this after tracheotomy, he places small pieces of sponge in an etherial solution of iodoform aud allows the ether to evaporate. These little pieces of sponge are fastened to a strong silk thread. After opening the trachea, he introduces one of some size into the cavity of the larnyx with a pair of curved forceps, and fixes it there so solidly that it cannot descend further spontaneously. This done he inserts the tracheal canula, and either fastens the thread of the sponge to it or about the neck. The sponge can be allowed to remain in place as long as is considered necessary without inconvenience.

Bouchet, in his comments, thinks it would not be possible for these secretions to pass into the trachea without producing terrible attacks of suffocation. The pneumonia of croup may depend upon the action of cold air and of dust particles, which can be modified by the wearing of a muslin cravat about the neck, but this pneumonia results more especially from cardiac thromboses, which convey, by means of the pulmonary artery, microscopic granules of fibrine into the lungs, forming embolic pneumonia. It is then that we observe at first these nuclei of pulmonary apoplexy, sometimes greyish or softened in their centers, and following them, the areas of hepatization caused by a small infectious embolus.

Expected Visitors to the International Medical Congress.—The *Lancet* has received information that the following men of eminence in the profession will be in attendance upon the meetings of the International Medical Congress at Copenhagen, Aug. 10, viz.:

From France: Pasteur, Paul Bert, Rannfer, Charcot, Verneuil, Cornil, Hazen, Mallassez, Chauveau, Ollier, Trippier, Lepine.

From Italy: Bizzozero, Mossa, Golgi, Peromento, Novaro, Reymond, Giacomo, Baccelli, Tomasi, Condelli.

From Holland: Douders, Guze, Engelmann, Heinsius.

From Germany: Virchow, Ludwig, Esmarch, Volkmann, His, Braune, Kronecker, Munk, Kühne, Heidenhain, Voit, Bernstein, Grohe.

A letter from the President, Professor Panum, concludes in the following business-like way: "We do not, however, intend to mention in our programme any festivities, solemnities, and such like. We would rather emphasize our intention to make the Congress a meeting for strictly professional and scientific work.

Hydrobromic Acid must be used in much larger doses than has been customary if any benefit is to be derived from it. Such is the opinion of Dr. H. C. Wood (*Medical News*, Feb. 23), who has been using this drug recently in epileptic cases. He found in three cases that half-ounce doses of the officinal hydrobromic acid was much more effectual than equivalent doses of bromide of sodium or potassium, and not nearly so liable to produce symptoms of bromism. He gives the acid after meals, with syrup, and diluted with half a pint of water.—*Medical Review.*

THE

Journal of American Medical Association.

PUBLISHED WEEKLY.

THE EDITOR of this JOURNAL would be glad to receive any items of general interest in regard to local events, or matters that it is desirable to call to the attention of the profession. Letters written for publication or containing items of information, should be accompanied by the writer's full name and address, although not necessarily to be published. All communications in regard to editorial work should be addressed to the Editor

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SATURDAY, MARCH 22, 1884.

EXPERT TESTIMONY AND COMPENSATION THEREFOR.—Dr. T. J. Turpin, of Alabama, sends us the following resolutions touching this subject, and requests our views through the JOURNAL. The preamble and resolutions are as follows:

"WHEREAS, The Supreme Court of Alabama, in 1877, decided that a scientific expert must attend a subpœna, and that his testimony can be forced without allowing special compensation for his evidence as an expert, and

WHEREAS, This decision bears hardly upon the members of our profession in this State, and is an injustice for which a legal remedy should be found, therefore be it

Resolved, That the Medical Association of Greene County recommends to the Alabama State Medical Association that they use all available and proper means to procure the enactment by the General Assembly of Alabama of a law similar to the law contained in the Iowa Code of 1873, which provides that 'witnesses called to testify only to an opinion founded on special study or experience in any branch of science, or to make scientific or professional examinations, and to state the results thereof, shall receive additional compensation, to be fixed by the Court, with reference to the value of the time employed and the degree of learning or skill required.'

Resolved further, That our Secretary be instructed to transmit, at an early date, copies of the foregoing preamble and resolution to the President, Secretary and Senior Censor of the State Medical Association; and that it shall be the duty of our Delegates to the next Convention of the State Medical Association to bring the matter before the Association, and urge upon them the great importance of prompt action and persistent effort upon their part in order to procure the enactment of the law desired by us.

The above resolutions were adopted by the Greene County Medical Association by the unanimous vote of all members present at the meeting."

That a physician or medical man must obey the summons of a court so far as to present himself as a witness at the proper time and place, the same as any other witness, is universally conceded. Such obedience is due and necessary for maintaining the just authority of the court, and promoting justice between man and his fellow.

And so far as the medical witness is in possession of facts or personal knowledge relating to the case under investigation, he must testify on the same terms as any non-professional witness. But when called simply as an expert, to give opinions or facts that constitute a part of his professional acquirements, for the purpose of enlightening courts and juries on questions of medical science and practice, the medical man is as much entitled to just compensation for his time and knowledge, as is the attorney at the bar or the judge on the bench. The professional knowledge and time of the physician or attorney are his capital stock, and as much his personal property as is the horse or cow the property of the farmer. And there is no principle of equity, and no emergency of justice which will justify the taking of such professional knowledge and time without just compensation therefor. If it is said that there are many cases in which the ends of justice cannot be attained without the aid of such knowledge, and consequently that its extortion in courts is a public necessity, we grant it. But if the public good requires that I should leave my private business and make a post-mortem examination, or go to the court-room and spend time in imparting professional knowledge that has cost me months of time and more or less money to obtain, then surely the public treasury should afford me a fair compensation for that time and knowledge. The public good, as well as the interests of clients, often requires the services of a judge or attorney, but we are not aware that any court has ever extorted such services without some compensation therefor. Public necessity may require the opening of a highway through a man's farm; and the public authorities may enforce the necessity by seizing the necessary amount of land and opening the road. But they must return to the owner a just compensation for the land taken. So the court may issue its summons and compel the medical man to leave his patients and repair to the jury box, or become liable to severe punishment for contempt of court. But if it compels him to impart his professional knowledge, either for the public good or private interests, without awarding

him just compensation therefor, it simply robs the witness of his personal property as plainly as if it had caused the seizure of his horse and buggy and converted them either to public or private uses. We think the foregoing views have been sustained by the rulings and decisions of a large majority of the higher courts in this country during the last twenty years. They are also in accord with the views expressed by the best writers on medical jurisprudence both in this conntry and Europe.

Medical College Controversies in Louisville.—For some months past, we have been receiving circulars and newspapers containg most disparaging comments on the Faculty of the University of Louisville, apparently emanating from parties connected with the Louisville Medical College. On the other hand, our attention has been recently called to a supplementary paper in the February number of the *American Practitioner*, written by Dr. D. W. Yandell, Professor of Surgery and of Clinical Surgery in the University of Louisville, in which he shows most clearly that from the Faculty of the Louisville Medical College has come the numerous letters to students in all parts of the country directly soliciting their attendance in that institution at half the published rate of charges, under the pretense of issuing "beneficiary scholarships," etc., some of which have attracted the attention and been commented upon by the Secretaries of the West Virginia and Illinois State Boards of Health. The letters given in full by Dr. Yandell, with names and dates, are sufficient to show that the Louisville Medical College during the last year has been reviving the disgraceful practices so freely indulged, in former years, by what was known as the double-head Louisville–Kentucky School of Medicine. How men of education, and sometimes of rare talents, can allow themselves to pursue policies and indulge in practices in the name of a medical college, which they would instinctively shrink from as disgraceful in their individual professional capacity, is a mystery to us. There is only one item of comfort to be gleaned from all this unprofessional scrambling and bidding for students; which is that it is rapidly maturing a public sentiment, both in and out of the profession, which will soon lead to the enactment of such laws as will effectually separate from medical colleges the right to grant diplomas conferring the right to practice medicine.

Ancient and Modern Medicine.—The address of Dr. Bridge, in the present number of the Journal, on the more recent progress and modern character of the Medical Sciences, forms a good counterpart to the paper of Dr. Maughs in a recent number, on "What the Ancients knew of Obstetrics and Gynæcology."

Medical College Commencements.—The annual Commencement exercises of the Medical Department of the Arkansas Industrial University, located at Little Rock, were held on the evening of the 3d inst., at which thirteen candidates received the degree of M.D. An honorary degree was conferred on James A. Dibrell, Sr., M.D., of Van Buren, Arkansas. The occasion was honored by the presence of the Governor and many other prominent citizens, and the proceedings were such as to indicate that the Faculty of this young institution are honestly endeavoring to maintain a fair standard of education.

The second annual Commencement exercises of the College of Physicians and Surgeons of Chicago were held on Tuesday, the 11th inst., and were witnessed by a large audience. The degree of M.D. was conferred by the President of the College, Professor A. Reeves Jackson, upon fifty-two students who had passed examinations satisfactory to the Faculty. The doctorate address was delivered by Prof. C. W. Earle, who discussed the importance of Chicago as a center of medical education, and criticised justly the illiberal action of the Board of Commissioners of Cook County in obstructing the proper execution of the law for supplying material for the study of anatomy and surgery. The address was received by the audience with frequent demonstrations of approval. A banquet was given to the alumni and graduating class, at the Sherman House, in the evening.

Death of Lunsford P. Yandell, M.D., of Louisville, Ky.—We were pained by the announcement a few mornings since of the sudden death of this prominent member of the profession of Louisville. Dr. Yandell was a physician of high attainments and of good reputation as a writer and teacher. He has been cut off in the middle period of adult life.

Dictionary of Practical Surgery.—A "Dictionary of Practical Surgery" is in preparation, and is to be published by Messrs. Smith, Elder & Co., of London, within two years from the present time. The work will be produced on the lines of "Quain's Dictionary of Medicine," and will be edited by Mr. Christopher Heath.

SOCIETY PROCEEDINGS.

CHICAGO MEDICAL SOCIETY.

At the regular meeting of March 17, 1884, the following important topics were discussed: "On the Ætiology of Typhoid Fever," a paper read by Dr. J. F. Todd; and a second paper forwarded by Dr. Roswell Park, of Buffalo, N. Y., Second Vice-President of the Society, wherein he has deduced interesting conclusions concerning the following topics:

I, Suture of Nerves; II, Elongation of Nerves; III, Exploration of the Brain by the Hollow Needle.

It will be seen by a perusal of the following review of our former resident colleague's paper, that he has cheerfully responded to a request made to contribute his mite, and to furnish with needles and pen numerous thoughts on some of the select topics in the surgery of the nervous system, and we therefore present the main points embodied in the paper furnished by the Secretary, who, at the above date, read the article for the author.

We read[1] that Guillaume de Salicet, Lanfranc, Guy de Chauliac, and others, recommended the sutures of divided nerves. But when we remember that nerves and tendons were often confounded in those days, this interesting item loses part of its importance. In 1776, Cruikshank demonstrated the possibility of cicatrization of nerves. After him Fontana proved this cicatricial substance to consist, more or less, of true nerve tissue, and recommended its union by suture, when divided, and which was further advised by Dupuytren. But the first to actually practice it as a physiological experiment on human patients were Baudens, Langier and Nelaton, the two latter having each within a single week, in 1864, a case which each for his own part reported.[2] It happened very curiously that in each of these cases it was claimed that sensibility and motility had returned within 24 hours after operation. This seemed incredible, and Richet[3] cleared up the matter by reporting a case. This author claimed, and most properly, that a similar state of affairs had obtained in those cases in which Langier and Nelaton had claimed such surprising results, and that they had not accurately studied their cases before operating. Since that time the subject has been studied experimentally and clinically, until now the indications to the surgeon are perfectly clear. In the literature on this subject may be found among others the views of Arloing and Tripier, Langerfeldt, Lemke, Kraussold, Page, Brown-Sequard, Tillmanns, Nicaise and Holmes.

The exact statistics of all cases reported to date, as nearly as the writer could estimate, is 30 that are on record, nearly all of which have been gratifyingly successful. To these he would add two more never yet reported, along which may be also added some features of the operation.

[1] International Encyclopædia of Surgery, iii., 621.

[2] *Comptes Rendus*, 1864, No. 25.

[3] *Union Med.*, 1867, p. 444; *Gaz. des Hopitaux*, 1867, p. 519, *et seq.*

Case I.—Rupture of the Sciatic Nerve—Immediate Union—Restoration of Function.—H. R., æt. 13. In 1881 the surgeon excised the hip joint of this patient (who was then 11 years of age) for long standing and extensive disease. He made a good recovery from a severe operation. In time sinuses burrowed in the region of the buttocks, along with other evidences of new and extensive disease, and Feb. 9, 1883, radical operative measures to remove the disease were again undertaken, the patient being admitted to the Michael Reese Hospital, Chicago. He was assisted by Drs. Lackner, Tracy and McAuliffe, and proceeded first to explore the parts. He found caries of the tuberosity and other parts of the ischium, sinuses leading inside the pelvic cavity and around the rectum. In brief, aggravated tuberculous disease of the bony pelvis and contents was present. In order to secure access to the parts, and to permit the necessary manipulation, a flap composed of the buttocks had to be laid up on that side, owing to the cicatrization following the previous operation, and the present local disease and induration. The sheath of the sciatic nerve had contracted firm adhesions to the overlying parts. The nerve was unmistakable, but the tissue was in the way. So one of the gentlemen present undertook to hold up the flap with a powerful retractor, while the operator dissected the tissues from the nerve. Being short of sufficient assistance, the patient, inadvertently, was permitted to so far recover from his chloroform that he gave a violent wrench and turned partially around, when it was discovered that the nerve had been torn completely through, the ends, while not exactly ragged, being anything but smooth. The ends were dissected free and the operation proceeded with as had been originally contemplated, *i. e.*, by resection of a good portion of the ischium, scraping out of the sinuses leading into the pelvis, inserting drainage tubes, etc., after which the nerve ends were united, first snipping them off evenly with the scissors, and then sutured as accurately as possible by two catgut threads passed entirely through the nerve trunk and about a quarter of an inch from the line of section. After this, the soft parts were closed as usual, proper provision was made for drainage, and a Lister dressing applied, the whole having been done under the carbolic spray.

For about a week there was absolute paralysis of sensation and motion throughout the region supplied by the great sciatic. Thirteen days after operating there was but a small area of integument near the external malleolus, which was not sensitive as usual, while he could move his leg as well as before the operation, and, judging by his progress, regeneration was practically complete in a day or two more.

Case II.—Division of Radial Nerve and Certain Tendons—Suture of same after Two Weeks—Restoration of function. C. D. G., aged 16. April 1, 1883, patient cut his right wrist with a cheese knife, in such a way that severed the radial nerve and artery, and the tendons of the extensor ossis metacarpi pollices and extensor primi internoidi pollicis. The physician who saw him at the time of the accident contented himself with checking the hæmorrhage. At

Reese Hospital, Chicago, on the 16th, the following condition was noted: Hand dropped to the ulnar side, with sensibility of those parts supplied by the radial nerve extremely impaired, and indeed in the central portions of that area practically lost.

After anæsthetizing him and dissecting down upon the part, found the tendon ends retracted within their sheaths so as to be an inch apart. Opened the sheaths and carefully united the tendons by catgut suture, and their sheaths over them by interrupted sutures of the same material. Then the ends of the radial nerve were found, and freshened and brought together by a single catgut thread. Over all iodoform dressings. By May 8 sensation was restored to the area supplied by the radial nerve; by the 25th it was evident that the tendons had firmly reunited, and, except as limited by partial adhesions in their sheaths, were capable of reassuming their functions. In course of time these adhesions became stretched, and the hand became very nearly as useful as before.

Commentary.—Suture of nerves is known as *direct* when the suture material is passed directly through the nerve trunk, and as *indirect* when only the nerve sheath is included; the former is usually preferable. There is fair prospect of success even months after the original injury, as witness the case in which Wheelhouse[1] united the sciatic fully nine months after the accident which severed it, the patient in four months more being able to do all manner of hard work; while Jessop, according to Tillmanns[2], has recently operated *nine years* after the injury, and with fair success. Nevertheless, the sooner it is done the better, and the quicker will be the result.

If, on dissection, the nerve ends prove to be clean cut (in recent cases), they need no further attention before uniting them, and the ordinary full curved surgical needle will suffice for the operation, taking care to insert and pass it flatwise between the bundle of nerve fibers until the broader cutting part is through, and then to turn the needle half round and let the carbolized catgut slip through the little slit. It may be necessary to introduce two or three sutures, especially in the larger trunks. To avoid tension of the limb, the part must be dressed accordingly and immobilized. Observe full antiseptic measures. Evidently, primary union is only such in appearance. It is cicatricial, not physiological. Immediate suture does not prevent degeneration, but simply permits regeneration to take place much more rapidly than it otherwise would. But immediate union of divided nerve tissue does not occur. Letiévant has suggested autoplastic operations on nerves, and Gluck in 1882, at the Congress of German surgeons, reported some astonishing successes in neuroplasty by transplantation. While the writer has not as yet performed this operation, he would not hesitate to make the experiment of transplanting nerve from some animal into a patient did a suitable case present.

It may be well to add, no case yet known has had neuritis or tetanus, or have any untoward consequences resulted from this sort of surgery of the nerves. The operation deserves much more cordial recognition and acceptance than it has yet received.

II.—Elongation of Nerves.

Upon this portion of the paper the writer dwelt considerably upon the literature, and many were the authorities quoted. Its application has apparently, therefore, not been restricted to neuralgia and contractures, but has been extended to anæsthesia and paralysis, great atrophy, convulsive affections, tetanus, to locomotor ataxia, and even to anæsthetic leprosy, etc.

To Nussbaum, says the writer, we owe a debt of gratitude for making the way clear, and first putting "nerve stretching" into practice. While resecting an elbow in 1860, his assistant accidentally but forcibly stretched the ulnar nerve, and it was noticed the tetanic cramp with which the arm was previously affected totally disappeared, which made a strong impression on his mind. In 1869 it happened that Billroth had a patient who had received a violent contusion of the buttock, and subsequently developed epileptiform paroxysms. Under the impression that there was nerve irritation from some bone splinter, he denuded the nerve, without finding anything wrong; but the nerve had been disturbed, and more or less stretched, and recovery followed. Acting on these hints, Nussbaum for the first time practiced intentional elongation in 1872, the case being one of contracture of the upper extremity consecutive to contusion. Recovery followed the operation. Without discussing the general merits of the operation, or the statistics, or extent of stretching that nerves will bear, nor yet the changes resulting therefrom other than clinical results obtained, we will be content in making synopses of the five cases reported by the writer, that have not heretofore been placed on record, in three of which elongation was made on purely empirical grounds, and merely as physiological experiments.

CASE I.—Chronic Sciatica—Elongation—Recovery.—W. L., æt. 25. Has suffered severely from sciatica for some five months; has lost considerable flesh; has been all this time under medical care, and for the last six weeks in the County Hospital, Chicago. A most varied internal treatment has been resorted to, as well as the use of electricity, part of the time intelligently applied. Patient was admitted into the Michael Reese Hospital, Chicago, and on June 15, 1883, he was anæsthetized, and the sciatic nerve of the affected side was stretched. The operation was made under the spray. By the 20th, when the dressings were changed, the wound was found to have healed per primam, pain was relieved at once, and at this date sensation and motion were found to be nearly normal. There was now and then a twinge during the next month. July 20, when he was discharged, he simply noticed an occasional pain in one small spot in the calf of the leg. September 1, he called to say he was perfectly well.

CASE II.—Toy-Pistol Tetanus—Elongation of Brachial Plexus—Amelioration of Symptoms.—A. G., æt 10. On the 4th of July, 1883, patient injured

[1] *Brit. Med. Jour.*, Aug. 5, 1876.

[2] Loc. Cit., case 11.

his left hand with a toy-pistol. On the 11th, at 4 A. M., he developed the first symptoms of tetanus. He was at once brought to the Michael Reese Hospital. Saw him at 11:30 A. M. At that time there was moderate clonic spasm of the muscles of back of neck, with tonic exacerbations; found a suppurating wound in palm of left hand. The patient was anæsthetized, operated under the spray. The palmar wound opened, found it foul, and containing a piece of wadding, which was removed and the cavity scraped. An incision along the inner border of the biceps brachii was made, the nerves isolated and stretched in each direction, including the median, ulnar, and internal cutaneous nerves, and that of Wrisberg. Wound was closed over a small drainage tube, and iodoform dressings applied. The patient improved decidedly after this procedure. ℞. Squibbs' ext. physostig., gr. $\frac{1}{5}$ hypodermically every two hours, also sodii bromid., gr. x every two pours, and chloroform inhalations during any tetanic seizures. Evening, condition very satisfactory. Next morning about 7 o'clock he complaiued of pain about the heart, and died within an hour, apparently from spasm of the diaphragm. Autopsy not allowed.

Case III.—Motor Paralysis of Right Leg, following Spinal Meningitis—Elongation of Sciatic Nerve—Negative Result.—A. K., æt. 40. In July, 1881, was seriously sick, which was probably spinal meningitis. At present he suffers from monoplegia, the right lower extremity being the part involved; has been under the care of several physicians, and recently a patient in the medical department of the Michael Reese Hospital, where, along with electricity, various other remedies were tried. Elongation of the sciatic as an experiment was proposed, patient accepted it as such. Sept. 15, 1882, operation under the spray. The limb was suspended by the nerve and stretched from above downward and *vice versa*. Heart's action momentarily disturbed. Union per primam.

October 17, patient acknowledges perceptible improvement. Very little improvement was made in several weeks longer that he remained in the hospital.

Cases IV and V.—Paræsthesia and Dysæsthesia of Unknown Origin—Elongation of Sciatic, and later of Crural Nerves—No Result.—H. K., æt. 32, has suffered fourteen years from perverted sensations, causalgia, etc., referred to integument of lower extremities, especially the right one. Of late, complains of a feeling of intense cold, referred particularly to the area of distribution of the right sciatic and peroneal nerves. His intelligence is not of high order. Patient has been under the observation of Dr. Ernst Schmidt for years, who finally suggested elongation as a pure experiment, and admitted him to the Michael Reese Hospital, June 22, 1883. Sciatic and peroneal nerves were stretched with the usual precautions. July 1, no improvement, and at patient's urgent request, the anterior crural nerve was stretched, and yet no benefit seemed to accrue. Each time the nerve was stretched downward in this case, and also an irregularity of the heart's action occurred for a few seconds.

Commentary.—Case I exhibits the happy effects to be obtained in obstinate cases of sciatica, resisting medication. That the operation has a wide sphere of usefulness in this form of complaint, of which not a few cases are already on record.

Case II exhibits at least the temporary relief to be obtained by this measure in cases of tetanus. That we cannot afford to reject this method of treatment, for amelioration of symptoms is better than no impression at all, although in this case, an error may have been committed in omitting also to stretch the musculo-spiral nerve, and possibly, that too much sedative treatment was given the patient, and not sufficient stimulating nourishment; a not infrequent mistake.

Cases III., IV., and V. were undertaken, as already remarked, on purely experimental grounds, and the patients accepted it as such. It further serves to prove that we usually learn more by our failures than from our successes.

III.—Exploration of the Brain by the Hollow Needle.

Perhaps there is no special literature on this subject. To illustrate the ease with which it may be done and its harmlessness, the author cited the following cases:

Case I.—Gunshot Wound of Brain—Trephining—Repeated Exploration for Pus—Extrusion of Fragment of Bone—Recovery.—J. L., æt. 20. On the afternoon of July 4, 1883, received a bullet wound of the left parietal eminence; brought to the Michael Reese Hospital. The house surgeon abstained from exploring the wound, but clipped the hair short and made antiseptic occlusion with iodoform cotton; also applied ice-bags. At evening there was complete right hemiplegia, pulse 90, pupils normal, patient conscious and rational; continued the ice-cap, and gave directions to use catheter.

Next morning learned of patient having two convulsions during the night; he also lost consciousness; pupils normal and respiration natural.

Exploration under the spray revealed a comminuted gunshot fracture; trephined; removed several small fragments, some of which were partially imbedded in the brain; removed also a piece of the small pistol bullet; compression was then made, and dressings of napthaline gauze applied. For several days patient's condition was satisfactory, except that the hemiplegia persisted.

July 13.—Answered questions rationally.

July 18.—There was free discharge of pus.

July 20.—Symptoms of central irritation; fear of abscess forming; dressings removed; introduced a well cleansed needle of a hypodermic syringe through the cicatricial tissue. Explored in different directions by its full length, never completely withdrawing the needle point; no pus and but a few drops of blood entered the barrel of the syringe. No anæsthetic was given, nor pain complained of; no unpleasant effect of any kind followed.

July 23.—Has some control of right leg, but the arm was in a contracted condition.

July 26.—Patient very fretful and irritable, discovered a hard substance under the integument tie. Upon cutting down (without anæsthesia), removed a piece of bone of the size of a silver half-dime and the full thickness of the skull. To be certain that no abscess was forming, exploration was again made with the hypodermic needle as before, and again with negative results.

July 28.—Patient discharged, wearing a lead plate to repress a tendency to hernia cerebri.

Aug. 3.—Patient steadily improving, and regaining the use of his arm.

CASE II.—Suspected Abscess of the Brain—Exploration.—This case presents a humorous side. H. H., æt. 38, admitted to the Buffalo General Hospital during the first week in January of the present year; no accurate history elicited. Patient had facial paralysis of right side of the face; gave a very indefinite history of suppurative trouble of right middle ear, dating back for years. Had also further paretic symptoms in the limbs, incoördination of ordinary movements; incontinence of urine and fæces; pupils unequal, but sensitive to light; pulse and temperature normal. He gave no history of convulsive seizures of any kind; syphilis denied.

Jan. 7.—Was summoned to a consultation concerning the case; others present, Drs. Wyckoff, Rochester, and Gay. For several hours patient had been comatose; pulse had been as low as 48; and his general appearance was as of one suffering from compression of the brain. Bearing in mind the trouble in his middle ear, and the other part of the history of the case, an abscess of the right side of the brain, or a collection of pus in that neighborhood, was suspected, and exploration was resorted to over the mastoid region, first trephining high enough to escape the lateral sinus. The longest needle of a hypodermic was then used, passing it inward, upward, downward, backward and forward, getting thereby only a few drops of blood. Wound was irrigated with sublimate solution, closed over a drainage tube, and a napthaline dressing applied. Spray not used; very little ether required. The succeeding day, Jan. 8, patient perfectly conscious. In short, this had been an epileptic seizure.

Jan. 16.—Wound perfectly healed over where the button of bone had been removed, and his general condition was improved.

Feb. 5.—Patient went home perceptibly better than when he entered.

Evidently here was an error in diagnosis, but an excusable one, as the man had not been in the hospital long enough to make a diagnosis possible, and where no history was obtainable, especially regarding his previous seizures. It is, moreover, obvious that the epilepsy in his case was secondary to some serious organic change, and a case of this kind, with its post mortem revelations, was still fresh in the surgeon's mind, which possibly also influenced him unduly to operate. In spite of error, however, the patient was benefited rather than injured by the operation. Exploration of the brain, at least of the upper and enveloping portions, by the hollow needle is harmless, and it should find a recognized place both in our surgical practice and in our text-books.

DISCUSSION.

Dr. J. G Kiernan said that Johnson (a Norwegian physician) had experimented on suture of nerves in fowls, and reported that to do so by the direct method it required 45 days before the animal regained the normal function of the affected part, and 60 days when it was performed by the indirect method. Regarding the second part of the paper, nerve-stretching, there is not much benefit to be derived from the operation, except in cases of neuralgia. The operation is not unattended by danger. During 1882, of 25 cases of locomotor ataxy reported where nerve-stretching was performed, five cases died from the operation. The same year, Graeme Hammond reported a case where the operation aggravated the disease. In a case of multiple cerebral sclerosis in which he was personally cognizant of the facts in the case, he reported the following result: The patient (a man) having previously been treated for a long time, visited an Eastern city, and returned markedly improved. Upon inquiry, I was told by him that the posterior cord of the brachial plexus had been stretched. I examined the surface over the region of the clavicle, and at once saw that only the integument had been cut through. Now here is a case of imaginative improvement, and the man really believed himself improved because, as he supposed and believed, the real operation had been done to relieve him. Regarding the case of tetanus reported in the paper, he did not think nerve-stretching was warranted after the source of irritation had been removed, the wound cleansed and dressed antiseptically, and the patient treated with physostigma. Regarding exploration of the brain, the speaker thought it an unjustifiable procedure, unless based on symptoms localizing the lesion in some portion of the brain.

Dr. J. J. M. Angear arose and debated the subject quite extensively. Regarding the vicarious action of nerves that the author alludes to, and their anastomoses, he did not fully understand. For it is a fundamental principle that nerves are continuous, and thought these words should not apply here, as we do to the circulatory system.

Regarding the cases of suture of nerves after long standing injuries, the speaker said:

When a nerve is severed and does not at once heal, that nerve or portion of it passes into fatty degeneration, and it is then no longer a nerve, and we might as well talk of restoring arteries after ligating them as of restoring nerve function after this manner.

To illustrate. We may have a painful stump after an amputation, and why? Because the ends of nerves supplying the parts have not passed through this degenerative process, but instead, little fibrous cords or bulbs, or a tumor has formed, and oftentimes may require to be removed to relieve the increased

sensibility. We do not have that immediate physiological action from suturing nerves. It takes weeks, or many months before physiological action is established.

With reference to elongation of nerves, great damage may be done by this procedure when this operation is performed. A surgeon often does look into the details, or the minutiæ, to see further what is wrong, about the nerve to be stretched, but proceeds to the stretching of it; and I very much doubt if peaceful, harmonious nerve action follows this operation, or at least, in but one or two exceptional cases.

Exploration of the Brain.—This we cannot endorse as a society. If we operate on the cerebrum of a patient fatal harm may result. I cannot see how it is the "harmless operation" the surgeon states it to be, and I think that death more frequently occurs than beneficial results following such procedures. Certainly there is great danger in probing the human brain, for a minute clot may form from the hæmorrhage that may ensue, and this carried along a vessel may close it. He cited a case of this kind where the man died. When the cerebrum of pigeons, *i. e.*, portions of it, are removed, they are greatly incapacitated after this has been done.

Regarding trephining for confirmed epilepsy, I do not think we are justified in doing this. A case of this kind is under my care now, that of a woman where trephining was performed, and the case is on record to-day that a cure was effected thereby, whereas the truth is, before the printer's ink was dry the woman grew worse, and has remained more so than was her condition previous to the operation.

Dr. G. C. Paoli. Let us admit for the sake of argument that suture of nerves and nerve-stretching will relieve suffering humanity. But no statistics that he knows of are yet published of what the percentage of successes are. He does not doubt but what in a very few cases nerve-stretching may prove beneficial. We often admire the boldness of a surgeon, but what a surgeon does today he would years ago have been branded for as committing murder. Some of our colleagues that are old in the practice of the profession are for like reasons, perhaps called "old fogies," because we do not go ahead and cut, but nature heals our cases, and ere long it may be that the operation of nerve-stretching will be performed in acute neuralgia, as it is now done to relieve chronic forms of it. The operation for sciatica has been in vogue during the past ten or fifteen years only.

Dr. D. A. K. Steele thought the discussion thus far had been quite severe in criticizing the paper, and thought immediate nerve suture to be justifiable. It should be done oftentimes where only the integument is sutured. Nerve stretching, he thought, useless in tetanus and locomotor ataxy, whereas in obstinate sciatica it cures, and is a justifiable operation.

The last portion of the paper, on Exploration of the Brain, is as yet certainly a mooted question. It seems to me that it cannot be done without a blood clot forming, or wounding a blood-vessel, or that paralysis may ensue. If such is the case, then it is not a justifiable operation. Some portions of the paper merit much praise, and as such I have been much interested.

Dr. R. Tilley thought the surgeon was not justified in doing more at the first consultation in the case of toy-pistol tetanus cited in the paper, than the removal of the piece of wadding and the mere cleansing the wound and dressing it properly, and using antiseptic measures, etc., etc.

Regarding suture of nerves and union of nerve tissue, experiments have been tried where crossing the nerves has been done—by crossing the distal end over the central portion, (X, thus) and then it took from two to ten weeks before they become adherent and function restored. Complete paralysis has occasionally resulted.

Motion that the Society do now adjourn prevailed.

L. H. M.

Among those from this city and Springfield, Ill., who attended the "Sanitary Council of the Mississippi Valley," at its sixth annual meeting, held at Memphis, Tenn., on Friday, the 21st, were: Drs. John H. Rauch, Ralph E. Starkweather and Liston H. Montgomery.

OBSTETRICAL SOCIETY OF PHILADELPHIA—STATED MEETING, MARCH 6, 1884.

The President, R. A. Cleemann, M D., in the chair.

Dr. Wm. Goodell made the following correction of a misstatement.

"At the last meeting of this Society I made a misstatement with regard to that distinguished ovariotomist, Mr. Tait, which I greatly regret, and which I wish here to correct. I was misled by some remarks made by Dr. Sutton at the last meeting of the American Gyncæological Society. These were so reported as to convey to my mind the impression that Billroth was the only European operator who did not refuse any case of ovarian tumor, however unpromising it was, and that Mr. Tait—to borrow Dr. Sutton's language—'does not remove many large tumors, those which weigh from sixty to sixty-five pounds, with extensive adhesions, etc.' In quoting this, by a careless slip of the pen I changed the word 'many' into 'very,' and in addition I wholly misapprehended the purport of the above sentence. Dr. Sutton has since, in the *Medical News* of February 23, explained that he did not mean that Mr. Tait selects his cases, for he was 'not aware that this British ovaiotomist refuses to remove a tumor because it is large,' but that Mr. Tait has the largest line of ovary and tube-cases and the shortest line of big ovarian cysts of any man I (Dr. Sutton) visited in Enrope.' In making this correction here, I wish to repair the injustice which I unwittingly did Mr. Tait before this Society."

Dr. Goodell then exhibited an extra-ovarian cyst with the following history: The lady, aged 28, and the mother of four children, had a miscarriage early in last October. At that time her family physician discovered the tumor. It slowly grew, but gave the

lady so much inconvenience from pain and pressure that she was brought to his office late in the following December. It was not large but was very sensitive, and was diagnosticated to be an ovarian tumor.

Both ovaries were removed early last February and the lady recovered promptly. The peculiarities of the cyst were to him unique. The ovary lay to one side of a thick-walled cyst, and at such a distance from it that the cyst could have been removed without injury to the ovary. The latter was, however, extirpated along with the cyst because it was diseased. Hitherto all parovarian cysts which he had encountered were thin-walled and contained a clear fluid. But this one had thick walls and contained a turbid, brown fluid. It started from the left broad ligament and was adherent to the bladder, omentum and abdominal wall. Another point of interest was the fact that the right ovary had doubled its size from follicular degeneration, and yet pregnancy had taken place.

Dr. Robt. P. Harris suggested the possible existence of a third ovary as the starting point of the tumor. He also thought that the presence of a third ovary might explain the persistence of the menstrual flow in some cases, after the operation of double ovariotomy.

Dr. Goodell also exhibited a coceyx removed for coccygodynia. The patient had met with a fall down stairs some years previously and the injury was followed by a vaginal abscess of some kind. She had all the classical symptoms of a very bad coceygodynia, and had fallen into a nervous condition which bordered on insanity. Dr. G. had intended merely to sever the nervous attachments of the coceyx by the sweep of a tenotomy knife, but after the patient had been put under ether, the tip of the bone was found unnaturally movable and giving distinct crepitation. The loose bone was therefore removed, and as the articulating surfaces were found rough and denuded, the whole coccyx was removed by bone forceps. Great relief followed this operation.

Although he had seen very many cases of coccygodynia, this was the first case on which he had operated. In a very few traumatic cases he had wished to operate, but was not permitted to do so. The vast majority of these cases are, in his experience, those of nervous or neuralgic coccyx, and they get well in his hands under rest, massage, electricity and appropriate constitutional treatment. The great difficulty, in cases of severity, is to decide between the nervous mimicry of the disease and pure coccygodynia in which positive lesions have been sustained, and their effects have not yet passed away, as for instance, in a sprained or a fractured coccyx, or in a rheumatic, a gouty, or an inflamed coccyx. There is yet another difficulty in the way of diagnosis, for sometimes an injury received in an hysterical woman is followed by local nervous phenomena, which will last long after the original lesion has been cured. For instance, on one occasion he had been so greatly deceived in the diagnosis of traumatic and nervous coccygodynia as to make him very cautious in resorting to the use of the knife. A highly intellectual lady, who spent her leisure in reading metaphysical works, received an injury to her coccyx by the sudden "backing" of the horse on which she was mounted. She was at that time suffering from nervous prostration, and the blow started up very exacting coccygeal symptoms. Dr. Goodell found retroversion and a prolapse of both ovaries. These dislocations were remedied and the patient put on a vigorous constitutional treatment; but she grew no better and an operation was proposed and agreed to. As soon as the day and the hour were decided upon, she lost all pain in her coccyx, and has not since had a return of it. This happened about six years ago. On another occasion he saw a very obstinate and severe case of coccygodynia, which he had been treating unsuccessfully for a long time, and which had a traumatic history, quickly disappear under an exciting family jar. In view of this experience he believed it always safer at first to consider coccygodynia as a local expression of a general neurosis, and to treat it accordingly.

Dr. J. H. Packard asked why Dr. Goodell had preferred the bone nippers to disarticulation in the first case.

Dr. A. H. Smith asked if Dr. Goodell had removed the entire coccyx. (Dr. Goodell was not sure, but thought so. There had been an abscess in connection with the injury and the bone was dead and somewhat necrosed, he had cut off one piece with the nippers and then disarticulated the remainder.) Dr. Smith continuing, said, there had been suppurative action probably followng anchylosis. Such a condition might result from injuries received from labor or from falling astride a chair back or a rail. Most cases were reflex hysterical or uterine pains, as will be proved by the freedom from tenderness when the finger is pressed on the coccyx when making a vaginal examination. He has never removed one, because he has seen such poor relief from the operation in any cases that have come under his observation. Why should relief come unless all the nerves and other painful tissues be also removed? He will be glad to hear the result of the operation in the case reported by Dr. Goodell this evening.

Dr. Packard demonstrated to the society a new method of applying axis traction to any ordinary obstetric forceps. The device consisted of two steel hooks arranged to catch in the fenestræ of the blades of the forceps, and terminating in rings through which a wooden handle is to be passed. The handles of the forceps are to be lashed together.

Dr. Smith remarked that Dr. Tarnier's first suggestion was to pass a cord through the holes drilled through a widened portion of the blades at the point at which handles are now attached. The hooks exhibited by Dr. Packard did not draw from the right point, and he thought there would be difficulty in adapting them when the head was high up.

Dr. Goodell thinks that Tarnier was anticipated in the cord attachment by another French physician.

Dr. B. F. Baer read a paper on The Significance of Metrorrhagia About and After the Menopause. (See *Amer. Jour. Obstet.*) Metrorrhagia recurring about the menopause is as likely to be the result of disease of the uterus or its appendages, as it is at any period previous to that time. The popular belief that flood-

ings at the change of life are physiological, often results in harm. That the blood-loss is depuratory or critical, and that it protects the vital organs from injurious congestion, is erroneous Where health exists the cessation of menstruation will be attended by no more aberrations of function than are seen in its establishment. An analysis of 2,200 cases treated in hospital and private practice, show that nearly the same number of women sought advice during the establishment and the decline of menstruation, and it further shows that the numbers rapidly increase as the period of greatest fecundity is reached, and decline after it is past.

Epithelioma of the cervix may result from injury of that organ, but also requires some peculiarity in the structure of the tissues which renders them susceptible to an induced dyscrasia. When a woman in the midst of the fertile period suddenly ceases to bear children, there is often some local cause for it. There is some causative relation between acquired sterility and cancer. It is safer to believe the disease of local origin, for we will then endeavor to discover and remove all sources of irritation, and possibly prevent its development. Detailed histories of a number of cases are given, to illustrate the truth of the positions assumed. Where the menopause is retarded beyond the usual period, the cause can often be found in some diseased condition connected with the sexual system, and as a rule it is an old standing trouble. When metrorrhagia recurs after the menopause has been fully established, it is almost invariably the result of a pathological change in the tissues of the uterus.

Dr. Goodell agrees almost wholly with what Dr. Baer has said. He thinks the dangers of the menopause much overrated. Cancer and fibroids of the uterus occur more frequently at that age than any other, and have caused the popular dread. Although hæmorrhage is always pathological, its cause cannot always be discovered, and in this dodging period serious hæmorrhage may occur and no dangerous condition exist. He would like to believe that cancerous growths had a benign incipiency, but cannot go so far. The microscopists make many mistakes in ascribing malignancy to growths removed from the uterus. Dr. Goodell then gave a number of cases in which experienced microscopists had given prognosis of early fatal termination, based upon the cell formation of growths removed from the uterus, but these cases had recovered, and now showed no evidence of any diseased condition. With regard to the small proportion of cancerous growths following laceration of the cervix uteri, the doctor called attention to the large number of Irishmen using clay pipes, and the small number of lip cancers, and yet it is universally acknowledged that the use of a clay pipe is the principal cause of such growths.

Blood-letting is practiced very freely in Turkey and the East, and women, as a consequence, get very stout. Such are more liable to profuse hæmorrhage at the dodging period.

Dr. Wm. T. Taylor reported a case of malarial poisoning in a newborn babe. We have frequently observed fevers of a malarial type in very young children, in some even during the first year, which were ushered in by a convulsion or other prodrome, without a rigor, as occurs in older persons, and their character is only recognized by a repetition of the attack in a day or two. But the youngest subject of this disease which I have met with is the following case:

Mrs. A. R., during her second pregnancy was affected with malarial fever, and although she was then residing at the seashore, was obliged to take occasional doses of quinine to control it. She returned to her city residence at the end of the season, but continued using quinine from time to time until the end of her uterogestation, which was completed in November last, when her babe was born. Her labor was natural and easy, and she had no unfavorable symptoms. The child appeared healthy, was of good color, but was smaller and feebler than her first born at its birth. As she had a good supply of milk it soon drew the breast quite vigorously.

About one week after its birth the nurse called my attention to "weak spells" which it had occasionally, accompanied by coldness of the skin, a feeble circulation and prostration, which continued for fifteen or twenty minutes, and were followed by a clammy perspiration. By the application of heat to the body and giving it a little brandy and water or other stimulant, it would revive.

I observed that these "spells" had a periodicity, occurring every two or three days, and considering them malarial, I gave the mother quinine and valerianate of iron, which, acting therapeutically through the milk, soon caused the "spells" to cease, and the babe became well and fat. I also gave it small doses of the elixir of cinchona for several weeks.

This child must have contracted this disease whilst in utero through the placental circulation, for being born in a perfectly healthy locality it was not exposed to any external malarial influence.

When labor began the quinine was stopped and was not resumed until the condition of the child required it, when it soon showed its anti-periodic action by completely arresting these "weak spells," for now the child is perfectly well.

Dr. R. P. Harris related a case of parallel character, which had occurred some years ago in a malarious neighborhood. The mother was under treatment before labor. The child had chills and fever when quite young and was treated through the mother.

W. H. H. Githens, Secretary.

Discontinuance of the "Proceedings" of the Medical Society of the County of Kings.—As a circular tells us, with the completion of the eighth volume, this publication is discontinued by order of the society. Many will regret this action, for although it was always a quiet, unpretending publication, confining its material to its own proper work, its readers looked for its regular monthly appearance with the confidence of finding well-selected, vigorously put and valuable matter in its pages.

STATE MEDICINE.

STATE BOARD OF HEALTH OF CONNECTICUT.

BY DR. C. W. CHAMBERLAIN, SECRETARY.

MORTALITY IN JANUARY, 1884.

	HARTFORD.	NEW HAVEN.	MERIDEN.	WATERBURY.	NEW BRITAIN.	BRIDGEPORT.	NORWICH.	NEW LONDON.	MIDDLETOWN.
Total deaths	90	99	20	33	16	44	25	18	16
Monthly death-rate	21	16	13	16	12	15	12	16	15
Zymotics	31	12	6	8	4	6	4	7	3
Infantile	32	21	..	2	4	12	4	6	3
Nervous diseases	11	18	..	3	..	1	5	..	1
Heart diseases	2	8	..	3	1	1	2	2	1
Scarlet fever	1	..	..	3	1	..	..	..	..
Typhoid fever	1	3	3	1	1	..	2	2	1
Typho-malarial fever	..	..	1	..	..	..	..	..	..
Malarial fever	1	..	..	2	..	..	..	..	1
Diphtheria and croup	25	5	..	..	1	..	..	3	..
Whooping-cough	..	..	..	..	..	..	..	..	..
Diarrhœal diseases	..	2	1	..	..	4	..	..	..
Cerebro spi'l meningitis	..	..	1	1	1	1	..	1	..
Consumption	10	13	6	10	..	8	4	..	2
Pneu'ia and congs'n lung	8	6	4	2	1	4	..	..	3
Bronchitis	4	2	..	..	..	..	..	..	..
Old age	8	6	1	..	..	6	..	..	2
Railroad accidents	1	..	..	..	..	..	..	..	..
Accident and violence	2	1	..	..	1	1	1	2	1
In public institutions	8	..	..	..	..	..	..	..	3

With the exception of Hartford, the sanitary history of the month is exceptionally good. The highest death rate is 16, the percentage of zymotic diseases not large, nor the percentage of deaths of those under 5. The increase in the relative frequency of typhoid fever over malaria is shown by the ratio of deaths, 14 to 5. The cold weather is, perhaps, equally unfavorable to the causation of both types of disease, although the falling off in malarial diseases as the severe cold weather comes on is more marked than in typhoid, but the latter is not considered as a winter disease. No report has been made of winter cholera, although it reappeared in Providence early in the winter.

The death rate of Hartford is not materially decreased from that of December. The ratio of deaths from zymotic diseases and of infantile deaths also continues unfavorable. The mortality from diphtheria continues at the same rate it has steadily maintained since November, a little over 20 a month, and thus far in February the ratio has been the same. In 1883 there were 200 deaths from diphtheria, 234 from croup and diphtheria, now generally classed together.

Total mortality to date is 270, which is larger than the deaths from the whole State for some years, and, excluding the cases of croup, equal to the deaths from diphtheria in 1879 in the whole State. The epidemic of scarlet fever in 1882 and 1883, caused 90 deaths, and the disease has reappeared as shown by the table. If the deaths from diphtheria had been crowded into a few months instead of extending over the year, the impression would be so great that immediate action would result. That would have been a better showing for the city, for this steady persistency indicates unmistakably the existence of unsanitary conditions that cause it, rather than any epidemic influence, except such as has been caused by the local conditions that have favored its spread.

The mortality in 1882 from diphtheria was 47, or 63 from croup and diphtheria, showing that there has been an unusual prevalence for a long period. These epidemics are found associated with unsanitary conditions. An ordinance embodying the opinions of the city board of health upon some of the causes that can be remedied, which are also favorable to the spread of zymotic diseases generally, has been submitted to the Common Council for its action. The reappearance of scarlet fever is not an encouraging feature.

Typhoid fever is reported from Berlin; also from Willimantic, one case fatal. Diphtheria and scarlet fever are also reported, with one death from each from the latter place, and also measles as very prevalent. Measles are also reported from Ashford and Saugatuck, and as epidemic in Willington and Stafford. Whooping-cough is reported from Bloomfield, Hampton, Union, Thomaston, Saugatuck, South Manchester, and Avon, but not unusually severe.

Scarlet fever is more prevalent than last month. Cases are reported from New Canaan, one fatal, Robertsville, Westport, Greenwich, one fatal, Berlin and Haddam, and as quite prevalent in North Haven. From Dr. Griswold, of North Manchester, five cases in two families, of a very malignant type, are reported, three of which were fatal, in a neighbouring village. The doctor's opinion was that the infection was conveyed by paper rags. The cases are discussed more fully in another connection.

Diphtheria is reported from Manchester, Thomaston, Avon, New Canaan, Hampton, Westport, and Bloomfield—six cases, two of which were fatal. The only death from whooping-cough is also reported, but the cases were quite numerous.

Diseases of the nervous system have been unusually prevalent, as shown in the mortality table and in the different reports. Erysipelas is also reported much oftener than usual.

While lung fever is reported as prevalent quite generally, the indications are that the mortality will be prolonged into the spring months, as has been the case of late. Bronchitis is also more prevalent than usual. Lung diseases generally are reported as quite prevalent in Oxford. Lung fever is reported also from Greenwich, Berlin, New Canaan, Cheshire and other places. Malarial fevers show rather an increase over last month, as reported from Haddam, New Canaan, North Manchester, Thomaston, Willington, Westport, and Bloomfield, the frequency of cases somewhat in the order named, increasing from the first onward. Avon also reports a decided increase, and there is no decrease in the cases reported from the part of South Manchester where there has been so marked a prevalence for some months past. There appear to be more cases proportionately in that region than elsewhere during the cold weather, although much less than during the summer and autumn.

New Hartford reports only one death for the month, a child of four months old that inherited consumption. An instance of death from freezing is reported from Saugatuck. A case where a child was killed by soothing syrup is stated to have occurred in Willington. An unusual number of deaths from old age are reported from all parts of the State. Bridgeport reports six over 70, four of whom were over 80.

One singular feature is the unusual prevalence of diarrhœal diseases. Should this continue it would be an intimation to look out for cholera next summer. It is a bad time to clear up filth when an epidemic is present. The time, if prevention is to be accomplished, is before the appearance of the disease.

MEETING OF THE STATE BOARD OF HEALTH OF KENTUCKY.

The State Board of Health held its regular quarterly meeting at Frankfort on January 16, and had a joint meeting with the House Committee on Sanitary Regulations, in the hall of the House of Representatives. The members present were Dr. Thompson, of Henderson; Dr. Holland, of Louisville; Dr. Shackleford, of Maysville; and Dr. McCormack, of Bowling Green.

In his report as Secretary, Dr. McCormack reported that in 85 of the 117 counties of the State, efficient boards of health were organized, and are now engaged in making sanitary surveys of their respective counties. Small pox had been reported from five counties, and in each instance prompt restrictive measures had been resorted to, and the disease checked. The Committee on Legislation reported a bill giving increased powers to and defining more clearly the duties of local boards of health, and providing for the appointment of a health officer in each county. Also a bill providing for instructions in hygiene in all the public and incorporated schools of the State, and a bill amending the present law regulating the practice of medicine, requiring physicians to procure licenses from county judges, based on proper evidences of qualification, and have the same recorded in the county clerk's office.

These bills were presented to and examined by the above named House committee. The Board also asks an increase in its annual appropriation—from $2,500 to $7,500. It claims that its work is no longer an experiment, and that having demonstrated its usefulness in preventing and restricting epidemic and contagious diseases, and in diffusing information amongst the people in regard to the preservation of health, it should be furnished with a sufficient amount of money, that it may multiply its methods of collecting information, and enter fully upon the enlarged sphere which increased knowledge has opened up. New York gives its Health Board $20,000; Michigan gives $15,000; Illinois $12,000; some of the other States, $10.000; no State, excepting South Carolina and Kentucky, appropriating less than $5,000. As the members of the Board receive no compensation for their services, and use the money in sanitary investigations, and to pay actual expenses, the demand seems reasonable.

BOOK REVIEWS.

Diagnosis of "Functional Murmurs." By F. C. Shattuck, M.D.

We have received the interesting paper of Dr. F. C. Shattuck on the above subject, and as a whole can commend it for the care which has been exercised in collecting facts, and for the clear statement of the differential features between organic murmurs and those of inorganic origin; but we cannot coincide with him in the following statement, which we fear may mislead some who are not thoroughly familiar with the various cardiac murmurs.

He states: "As regards prognosis and treatment, a murmur, even if persistent, is of no importance to the patient, unless it either is, or after a reasonable time, say six months if you choose, becomes associated with other well-marked evidences of a disturbance of the balance of the circulation, above all, enlargement of the heart in some or all of its divisions."

In this the author has overlooked those numerous cases in which, for years, organic disease of the heart causes murmurs, without any evidence of a disturbance of the balance of the circulation, but in which the heart finally undergoes the same changes as in the more rapidly progressing cases.

These cases are certainly of importance to the patient, as, sooner or later, serious symptoms will be developed, though they may be delayed for five, ten, or even twenty years after the murmur has been discovered. During this time, the author's statement that "the murmurs are of no importance to the patient," might sometimes hold good just so far as the symptoms of any serious disease, which symptoms were not of themselves a source of inconvenience, might be of no importance to the individual (as it would not benefit him to know of them); but in other cases, a knowledge of the impending danger might greatly prolong life, by enabling the patient to avoid excitement and excessive exertion which would throw an unusual amount of strain upon the heart, and thus hasten hypertrophy and final dilatation.

E. F. I.

64 State St., Chicago.

DOMESTIC CORRESPONDENCE.

MICHIGAN COLLEGE OF MEDICINE.

Editor Journal American Medical Association:

The fourth annual Commencement of the Michigan College of Medicine was held at Whitney's Opera-House, March 3, when 27 young gentlemen received the degree of Doctor of Medicine. The address was given by the Rt. Rev. S. S. Harris, Bishop of Michigan. He explained to the audience the duties and nature of the physician; demonstrated the virtues of the Hippocratic oath and told the large audience that they had also a duty to perform not only to their personal medical adviser, but to the profession

at large, and above all, that they should always pay their bills promptly. The degrees were conferred by the Hon. Sydney S. Miller, President of the Board of Trustees. The address to the graduates was given by Prof. Gastin, who, after reciting the education they had received, closed with practical advice for their future government.

The music for the occasion was furnished by Prof. Spiel, and was excellent. Floral gifts were given by the friends of the graduates, which were profuse in quantity and beautiful in arrangement.

After the close of the exercises, an elegant entertainment was given the alumni and invited guests by the Faculty, at the conclusion of which short speeches were made encouraging and giving good advice to the graduates.

The graduates were all males, and all were three course students. They had passed a thorough examination, both written and oral.

This college, although a junior, is determined that her graduates shall be well educated before being received for medical instruction, and equally determined that they shall be thoroughly educated in medicine before receiving the degree of doctor.

B.

EDITOR OF THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION :

Sir:—It is so very gratifying to be reproved by the venerable editor-in-chief of this journal for not having asked the prayers of the members of the Association for *more* than I did, that I am almost loath to suggest that if he will carefully read the proposed law I was so anxious to have the legislature of the State of New York given wisdom and courage (by prayer or otherwise) to enact, he will find that is "worth praying for."

As many others of the members of the Association may not know the precise scope of this contemplated law I present it herewith for publication. It is indeed a surprise for me to learn that the war that such boards as those of Illinois and West Virginia "can wage against medical ignorance and incompetence will never amount to more than light skirmishing along the outposts, and is hardly worth praying for;" nevertheless, I shall be very well satisfied if I can live to see skirmishing boards not only in New York, but in every other State as effectively armed as by the following:

AN ACT TO ESTABLISH THE MEDICAL FACULTY OF THE UNIVERSITY OF THE STATE OF NEW YORK, TO REGULATE THE LICENSING OF PRACTITIONERS OF PHYSIC AND SURGERY, AND TO FURTHER REGULATE THE PRACTICE OF PHYSIC AND SURGERY.

The People of the State of New York, represented in the Senate and Assembly, do enact as follows:

SECTION 1. On or before the first day of June, 1884, the Governor shall appoint the Medical Faculty of the University of the State of New York, to consist of nine (9) members, who shall be authorized practitioners of physic and surgery in this State, but none of whom shall be connected with any medical school or college; provided, that in the appointments made the representation of the several systems of medical practice recognized by the incorporated medical societies of this State shall be in the proportion of six, two and one, that is to say, the system having the largest number of practitioners to have six, that having the next largest to have two, and the remaining system to have one representative; and all persons desiring to enter upon the practice of physic and surgery in this State, after November 1, 1884, shall before doing so, comply with the provisions herinafter prescribed and obtain the license hereinafter provided.

SEC 2. Of the nine members of the said medical Faculty, three shall serve, in the first instance, for three years, three for four years, and three for five years; and these terms shall be severally distributed by lot at the first meeting of the said Faculty. All appointments made in the Faculty at the expiration of the several terms fixed above shall be made uniformly for the period of five years each. All vacancies occurring in the said Faculty, from whatever cause, shall be filled before the next semi-annual meeting of the same, by the appointments by the Regents of the University of a practitioner of the system of practice that had previously been represented by the person occupying the seat so vacated; and in case the several State medical societies shall nominate physicians to fill such vacancies, the Regents shall appoint some one of the physicians so nominated.

SEC. 3 The said medical Faculty shall examine all applicants for license to practice physic and surgery in this State. The members thereof shall meet at least semi-annually, and at such meetings shall faithfully examine all candidates referred to them for that purpose by the Chancellor of said University, and each furnish him a report in writing of his opinion as to the qualifications and merits of each candidate, referring briefly to the degree of proficiency evinced by the applicant in all the several branches in respect of which he was examined; which opinion shall be by him denominated favorable or unfavorable. The President or Secretary of the Faculty shall have authority to administer oaths, and the Faculty to take testimony in all matters relating to its duties, and any false statement made under an oath so administered shall subject the offender to prosecution for, and on conviction, to punishment for perjury.

SEC. 4. Such examination shall be in anatomy, physiology, histology, pathology, theory and practice of medicine, chemistry, surgery, obstetrics, materia medica and therapeutics, and such other branches in the several departments of medical science as the said Faculty may agree upon, subject to the approval of the Regents of the University. The questions forming such examinations shall be the same for all classes of candidates offering themselves, with the exceptions of the departments of materia medica and therapeutics, in which branches the questions for each candidate shall be prepared by the representatives in the Board of Examiners, of the system of practice to which such candidate wishes to be licensed.

SEC. 5. The orders of the Chancellor addressed to the medical Faculty and the decision of the Regents of the University in each case shall be attached to the written reports of the examiners, and shall thereupon become, and forever after be a part of the public records of said University.

SEC. 6 Any person, on paying twenty-five dollars into the treasury of the University, and on applying to the Chancellor for the aforesaid examination, shall receive an order addressed to the aforesaid medical faculty, instructing them to examine the candidates at one of the regular semi-annual examinations, provided that proof satisfactory to the Chancellor is first given that the candidate is over twenty-one years of age, of good moral character, and has received a diploma issued to him or her, conferring on him or her the degree of doctor of medicine from some legally incorporated medical college held to be in good standing by the said medical faculty.

SEC. 7. The Regents of the University, after finding that the members of said faculty participating in the examination have given an unanimous opinion in favor of a candidate, and that such examination has been a satisfactory test of the qualifications of said candidate, shall issue to him or her a license to practice physic or surgery in the State of New York, for which license the candidate shall pay to the University the further sum of fifteen dollars.

Said faculty may refuse to recommend a license to individuals guilty of unprofessional or dishonorable conduct, and for like

cause, after giving the accused an opportunity to be heard in his or her defense, the Regents of the University shall revoke said licenses.

SEC. 8. The moneys paid to the University under the provisions of this act, shall be appropriated by said Regents for, and shall defray the expenses incurred under the provisions of this act.

SEC 9. The medical faculty shall meet on the first Monday of November, 1884, at the University in the city of Albany, and seven members thereof shall then and thereafter constitute a quorum, and shall at once organize by the election of a president and secretary, and such other officers as may then be determined, and then and thereafter adopt such rules and regulations, not in conflict with the provisions of this act, as may meet with the approval of the Regents of the University; and shall forthwith proceed to the examination of all such applicants as shall then present themselves with the order referred to in section six of this act.

SEC. 10. Subsequent to the first day of November, in the year 1884, every person (except such as have before such date lawfully registered pursuant to the laws of the State in force at the time of the passage of this act), after complying with sections 6 and 7 of this act, shall, before commencing to practice physic or surgery, register in the clerk's office in the county where he or she practices or intends to practice physic or surgery, in a book to be kept by the said clerk, his or her name, residence and place and date of birth, together with the date of his or her diploma and by what institution granted, with the date of his or her license to practice physic or surgery within this State; at the same time the person so registering shall exhibit both the license and the diploma herein required to the clerk, and subscribe and verify by oath or affirmation, before a person duly qualified to administer oaths under the laws of this State, an affidavit containing a plain statement of all the facts as aforesaid, including his or her age, and shall file said affidavit and copy of said diploma with said clerk; said county clerk to receive a fee of twenty-five cents for such registration, payable by the person so registering. Nothing in this section shall be so construed as to prohibit medical consultation in the different counties of the State between legally qualified and registered physicians of this and neighboring States.

SEC. 11. A person who shall willfully swear falsely to any statement contained in the affidavit required by the tenth section of this act shall be deemed guilty of and subject to conviction and punishment for perjury; and a person who violates any of the other provisions of this act, or who shall practice physic or surgery in this State under cover of a diploma unlawfully issued or illegally obtained, or without a license as provided for in this act, shall be deemed guilty of a misdemeanor, and on conviction thereof shall be punished by a fine of not less than two hundred and fifty dollars nor more than five hundred dollars for the first offense, and for each subsequent offense by a fine as aforesaid and by imprisonment for not less than thirty days and not more than six months. The fine when collected shall be paid, one-half to the person or corporation making the complaint, the other half into the county treasury of the county where such conviction shall be had.

SEC. 12. For the purpose of this act the words "practice physic or surgery" shall mean to annex the letters "M. D." to one's name or to suggest, recommend or prescribe, direct or employ, as a matter of business or for a fee, for the use of any person, any drug, medicine, appliance, apparatus or other agency, whether material or not material, for the treatment, cure, relief or palliation of any real or supposed ailment or disease of the mind or body, or for the treatment, cure or relief of any wound, fracture or other bodily injury or infirmity, or any deformity.

SEC. 13. Nothing in this act shall apply to commissioned medical officers of the United States army or navy, or of the United States marine hospital service, nor to any members of the house staff of any legally incorporated hospital during the term of their service as such.

SEC. 14. So much of chapter seven hundred and forty-six, laws of eighteen hundred and seventy-two; chapter five hundred and thirteen, laws of eighteen hundred and eighty; chapters one hundred and eighty-six and six hundred and seventy-nine, laws of eighteen hundred and eighty-one, as are inconsistent with this act, and all other acts and parts of acts inconsistent with this act, are hereby repealed.

Very respectfully, your obedient servant,

ALBERT L. GIHON, Medical Director U. S. Navy.

U. S. Naval Hospital, Washington, D. C, March 15, 1884.

NECROLOGY.

BATEMAN, BENJAMIN RUSH, M.D., was born in Cedarville, Cumberland county, N. J., on March 4, 1807, and died July 23, 1883, in his 77th year. He graduated from Jefferson Medical College in 1828, and immediately commenced the practice of medicine in his native town, succeeding his father, the Hon. Ephraim Bateman, M.D., who was at that time United States Senator from this State.

Dr. Rush Bateman, as he was generally known, by his energy and zeal soon built up a very extensive practice, and for forty years, day and night, cheerfully responded to *every* call for his professional services. He was an invaluable citizen, and always foremost in every good work, always leading in every benevolent enterprise. He was widely known throughout the State, and occupied at different times many positions of honor and trust. As a wise and successful practitioner he ranked among the first. He became a member of the American Medical Association in 1853, and was a Fellow of the New Jersey Medical Society, having been its President in 1866, and was an honorary member of the Cumberland County Medical Society. The latter Society, at his death, passed the following resolution:

"*Resolved*, That this Society here record a sense of their great loss of one who, though he had reached a ripe age, was ever young, ever genial and companionable, and who always added interest to our meetings."

A letter written by the distinguished Dr. Gross to Dr. Ephraim Bateman, after the death of his father, will convey some idea of the impression the latter's character always made upon his friends and acquaintances:

"PHILADELPHIA, Aug. 1, 1883.

"MY DEAR DOCTOR:—I am grieved to hear of the death of my kind friend, Dr. Bateman. I saw him only a few years ago, and he was then in excellent health, with a countenance benignant, genial, and beaming with kindness. He must have been essentially a good man, and his death must be regretted by his many friends and fellow citizens. Thus we go. All must die; none can escape the inevitable lot.

Very truly, your friend,

"S. D. GROSS."

GEO. T. WELSH, M.D., New Jersey.

DR. C. H. VON KLEIN, formerly of Hamilton, has removed his residence to Dayton, Ohio.

MISCELLANEOUS.

To the Members of the Medical Profession of the State of Tennessee:

The fifty-first annual session of the Medical Society of the State of Tennessee will convene at Chattanooga, Tuesday, April 8, 1884.

The attention of the members is called to the fact that at the last meeting there were no essayists appointed for this meeting, and the society will expect the members to come prepared with volunteer papers to present to the meeting.

The committee on changes in the constitution will recommend that permanent members and delegates present at the sessions of the society pay a tax of $2, and permanent members not in attendance pay $1 and be entitled to receive the Transactions. These fees being in lieu of the present tax of $3 which has heretofore been collected whether the members were in attendance or not.

Reputable members of the profession throughout the State are invited to become members. Every physician who values his own interest and that of the people who trust their health and lives in his care should take every legitimate method of advancing the individual and general intelligence of the profession, and this can be done to a large degree by these pleasant re-unions and discussions of our every day work at the bedside. The earnest coöperation, therefore, of every physician in the State is needed and should be given to the State Medical Society, whose laudable object is to elevate the profession and advance the medical reputation of the State. The Society, now grown old in years and honors, has an enviable history, and the future should equal if not excel the past.

The N., C. & St. L. railroad will sell round trip tickets at four cents a mile on April 7, 8 and 9, good for return passage until the 12th.

The L. & N. railroad will sell round trip tickets at same rates at their stations to Nashville. These tickets must be shown at Nashville to purchase the tickets over the N., C. & St. L. railroad to Chattanooga.

The L. & N. will, however, sell round trip tickets at Memphis via McKenzie and Nashville to Chattanooga.

These reduced rate tickets can be purchased during the business hours of the day at stations in Tennessee only. These tickets must be purchased in all cases, as no certificate of membership will be recognized as claim for reduced return passage.

For further information address the Chairman of the Committee of Arrangements, Dr. G. A. Baxter, Chattanooga. C. C. FITE, Secretary.

Nashville, Tenn.

INTERNATIONAL OTOLOGICAL CONGRESS.—The next international congress of those interested in the treatment of diseases of the ear, is to be held in Basle, from September 1st to the 4th, 1884. Communications concerning it may be addressed to M. le Dr. Burckhardt-Merion, at Basle.

NEW BOOKS.

Long, H De l'adénome du sein et de son traitement parles injections iodées. 4to, 43 pp. Montpellier: Boehm et fils.

Martin, P. F. De la compression du nerf radial par un cal vicieux. 4to. pp. 72 Lille: Darel.

Mathieu. X De l'exostose sous-ungéale. 4to. 47 pp. Montpellier: Boehm et fils.

Millet-Robinet, Mme. et Alliu, E Le Livre des jeunes méres la Nourice et le Nourrisson. 18mo. pp xii 376, fi48 ,g. Paris: Chaix.

Molinié, J. Des quelques indications dans le traitement de la fievre typhoide et des principaux mozens des les remplir. 4to 114 pp Montpellier: Boehm et fils.

Négre C Du torticolis fonctionnel 4to. 52 pp. Montpellier: Boehm et fils.

Olivier, A. De la pneumonokoniose anthracosique. 4to 55 pp. Montpellier: Boehm et fils.

Paraut, L. Traitement du trichiasis et de l'entropion par la tarsoplastic 4to. 91 pp. Lyon: Buc et Demaison

Péringuey, J L De la pneumatoruétrie enrisagée comme moyen diagnostic. 4to. 54 pp Bordeaux: Durand.

Peyre de Fabreques G de De l'intervention obstretricale dans la presentation du siége décomplétée (mode des fesses) aprés, l'engagement. 4to 71 pp. Montpellier: Cristin, Serre et Ricome.

Pezet, P. De la matiere toxique à travers les siecles. 8vo. 124 pp. Montpellier: Boehm et fils.

Poirson, A. A. Contribution à l'etude des plaies de la cornée au pont de vue du pronostic et des responsabilites judiciares 4to. 50 pp. Lyon: Waltener et Cie.

Privat, G. Considerations sur l'astigmatisme 4to. 72 pp. Montpellier: Cristin, Serre et Ricome

Revue generale de physiologie 1883. 67 pp. Paris: Quantin.

Serre, St. H. De l'entérectomie et de l'enterorrhaphie dans les hernies étranglées suivies de gangrene. 8vo. 30 pp. Paris: A. Delahaze et Lecrosnier.

Simonin. Assistance publique de Meurthe et Moselle, 1882. 8vo. 82 pp, Nancy: Berger, Levrault et Cie.

Wernher, A. Zur Impffrage. Resultate der Vaccination und Revaccination vom Beginn der Impfung bis heute, nach der Quellenbearbeitung. 8vo. VII, 312 pp. Mainz: V. Zabern.

Vierordt, Herm. Die einfache chronische Exsudativ-Peritonitis 8vo. V, 141 pp. Tübingen: Laupp.

Talon, A. La Paralysie générale à l'asile des aliénés de Marseille. 4to. 100 pp Montpellier: Hamelin freres.

Troisier, Damaschino, Millard et Roques. Communications sur la pseudo-paralysie syphilitique infantile faites à la Société médicale des hopitaux. 8vo. 15 pp Paris: Alcan-Lévy.

Vincent, J. La Fièvre jaune épidémies de 1878 et de 1881 au Sénégal 4to 40 pp. Montpellier: Groltier et fils.

Wertheimer, E. Développement du foie et du systeme porte abdominal. 4to. 98 pp. Lille: Danel

Müller, Frdr. üb die diagnostische Bedentung der Tuberkelbacillen. 8vo 7 pp. Würzburg: Stahel.

Orth, Johs Compendium der pathologisch-anatomischen diagnostik, uebst anleitg zur ausführg v. obductionem, sowie v. pathologisch-histolog. Untersuchgn. 3 Aufl. 8vo. xx. 634 pp. Berlin: Hirschwald.

Otto, Dr. Künstliche Unfruchtbarkeit. 8vo. 20 pp Neuweid Heuser.

Passauer. die Direktiven f. das Verfahren vei Bekämpfung der contagiösen Auger-Entzündung. 8vo 30 pp. Gumbinuen Chrzescinski.

Rischmüller, Heinr. üb die Scharlachepidemie zu Göttingen im J. 1881-82. Inaug Dissert. 8vo. 37 pp. Göttingen: Vandenhoeck & Ruprecht.

Rodenstock, Jof. die Brille, deren Anschaffg u Gebrawch 8vo 28 pp. Würzburg: Kellner.

Schemata zum Einzeichnen v Befunden bei Untersuchung der Brust u Bauch. Organem. Skeletteinzeichnung. 8vo. 48 Taf Tübingen: Laupp.

Ibid. Zum Einzeichnen v. Befunden bei gerichtsärtzlichen Untersuchungen am Gehirn. 8vo. 48 Taf. Ebd.

Ibid. Am Schadel. 8vo. 48 Taf. Ebd.

Ibid bei laryngo-rhinoskopischen Untersuchungen. 8vo. 45 Taf. Ebd.

Ibid. bei ophthalmiatrischen Untersuchungen. 8vo. 48 Taf. Ebd.

Ibid. zu Temperatur, Pulse u. Respirations-curven, nebs Temperaturbellen. 8vo 48 Taf. Ebd.

Schultz, Bernh. Signo. Lehrbuch der Hebammenkunst. 7 auflg mit 90 Holzschn. 8vo. xxiii, 368 pp. Leipzig: Engelmann.

Schwalbe, Carl. die Radicale Heilung der Unterleibstrüche. 8vo. 58 pp Berlin: Gerschel.

Duncan, J. Matthews On Sterility in Women; being the Gulstonian lectures delivered in the Royal College of Physicians. Phila: P. Blakiston, Son & Co. 8vo. 136 pp. Cloth, $2.

Gowers, W. R. Diagnosis of Diseases of the Spinal Cord. 3rd ed. Phila.: P. Blakiston, Son & Co 8vo. 92 pp Cloth, $1.50

Michener, E., Stubbs, J. H, and others. Hand-Book of Eclampsia; or notes and cases of puerperal convulsions, comprising all the cases which have occurred during the present century within a radius of several miles around Avondale, Chester county, Pa, so far as can be ascertained. Phila: F) A. Davis, 12mo. 368 pp. Cloth, 75.

Ribot, Thevodor The Diseases of the Will. From the French by J. Fitzgerald New York: J. Fitzgerald. 8vo. 45 pp 15 cents (Humboldt lib. No. 52.)

Smith, Eustace. The Wasting Diseases of Infants and Children. 4th ed. enl. Phila: P. Blakiston, Son & Co. 8vo. 372 pp. Cloth, $3

Bazy, P. De l'intervention chirurgicale dans les tumeurs de la vessie chez l'homme. 8vo. 55 pp. Paris: Doin.

Blanc, L. Contribution à l'etude expérimentale des lésions du foie dans quelques empoisonnements aigus 8vo. 49 pp Lyon: Pitrat Ainé.

Breton, H. A. E. De quelques complications rares sur l'amygdalite phlegmoneuse. 8vo 63 pp. Paris: Davy.

Cherbetian, M Etude sur un cas de fibrome malin de la fosse iliaque chez l'homme 8vo. 46 pp. Paris: Davy.

Dauchez, H Descriptions vaccinales généraliséur (vaccinides et de quelques dermatoses suscitées par la vaccination. 7vo 145 pp. Paris: Delahaze et Lecrosnier.

Ducasse, L. De la peritoine par perforation intestinale dans le cours de la fièvre typhoide. 8vo. 58 pp Paris: Davy.

Dupré, P. Du traitement des hémarthroses du genon par l'im mobilisation et la compression. 8vo. 39 pp. Paris: Davy

Goullioud, P. Des osteites du bassin au point de vue de leur pathogénie et de leur traitement 4to. 134 pp. Lyon: Waltener & Co.

Landry, A. Contribution à l'etude du cancer du sein chez l'homme 8vo. 47 pp. Paris: Davy.

Leblond, A. Note sur 'la fécondation artificielle, à propos d'un jugement du tribunal de Bordeaux. 8vo. 11 pp. Paris: Lauweryns.

Luc, H. De la tuberculose de la conjunctive comparée au lupus de cette magueuse, contribution à la différenciation clinique de ces deux affections, 8vo. 39 pp. Paris: Davy

Marie, P. Lathyrisme et béribéri. 8vo 11 pp. Groupy et Jordan.

Santon, J. De l'hérédité morbide et de ses manifestations vésaniques dans la paralysie générale. 8vo. 82 pp. Paris: Delahaye et Lecrosnier.

Balandin, J. Klinische Vorträge aus dem Gebicte der Gehurtshilfe u Gynæcologie auf Grundlage eigener anatomischer u klinischer Beobachtungen. 1. Heft mit 12 lith. u. 1. 4th V, 127 pp. St. Petersburg Ricker.

Haas, Herm. Die acute Endocarditis Fine klinische Studie 8vo. 107 pp. Prag, Calve.

Heitzmann, J. Spiegelbilder der gesunden und kranken Vaginalportion und Vagina. 2. Abth. Mit 9 chromo-lith. Tafeln und 12 Holzschn. 8vo. 101 to 228 pp. Wien, Braumüller.

Hübner. Die Diphtheritis und ihre Behandlung. Nach eigenen Erfahrungen am Krankenbette. 2. Auflage. 8vo. III, 20 pp Berlin, F. Luckhardt.

Lübben, K. H. Beiträge zur Kenntniss der Rhõn in medizinischer Hinsicht. 8vo. 107 pp. Mit 3 Steintaf. Weimar, Gotha-Conrad.

Wollny, Ewald. Ueber die Thätigkeit niederer Organismen im Boden. 8vo. 26 pp. Braunschweig, Vieweg & Sohn.

Changes in the Medical Corps of the Navy for the Week Ending March 15, 1884.

P. A. Surgeon F. H. Terrill, to coast survey steamer Hassler.

P. A. Surgeon R. H. McCarthy, from the coast survey steamer Hassler, and wait orders.

Official List of Changes in the Stations and Duties of Officers Serving in the Medical Department United States Army, from March 8, 1884, to March 14, 1884.

Billings, John S., Major and Surgeon, granted leave of absence for one month, with permission to go beyond sea, to take effect April 1, 1884. (Par. 6, S. O. 61, A. G. O., March 13, 1884.)

Heizmann, Charles L., Captain and Assistant Surgeon, leave of absence extended three months. (Par. 9, S. O. 57, A. G. O., March 8, 1884.)

Wales, Philip G., appointed to be Assistant Surgeon, with the rank of First Lieutenant, to date from February 7, 1884, vice Brewster, resigned. (Mem., A. G. O., March 10, 1884.)

Kundler, Wm. H., First Lieutenant and Assistant Surgeon, assigned to temporary duty at Fort A. Lincoln, D. T. (Par. 3, S. O 26, Headquarters Department of Dakota, March 8, 1884.)

Fisher, Walter W. R., and Polhumer, Adrian S., First Lieutenants and Assistant Surgeons, assigned to duty in Department of California.

Stephenson, Wm., Borden, Wm. C., and Chapin, Alonzo R., First Lieutenants and Assistant Surgeons, assigned to duty in Department of the Platte.

Robertson, Reuben L., and Edil, Guy L., First Lieutenants and Assistant Surgeons, assigned to duty in department of Texas.

Crosby, Wm D, First Lieutenant and Assistant Surgeon, assigned to duty in Department of Arizona.

Gandy, Charles M., First Lieutenant and Assistant Surgeon, assigned to duty in Department of East.

Pilcher, James E, First Lieutenant and Assistant Surgeon, assigned to duty in Department of Dakota. (Par. 4, S. O. 55, A G. O., March 6, 1884)

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PUBLISHED WEEKLY.

VOL. II. CHICAGO, MARCH 29, 1884. No. 13.

ORIGINAL ARTICLES.

ON PULMONARY SURGERY.

[Read before the Second Congress for Internal Medicine at Wiesbaden, April 20th 1883. Translated from German by T. Bernauer.]

BY DR. FR. MOSLER.

O. Oe. Professor, and Director of the Medical Clinic in Greifswald.

The principle of modern medicine is that of localization. All real progress made in our science is due to its tendency to local treatment. One by one the cavities of the body are brought within its reach. It will, of course, remain for accumulated clinical experience to decide how far we shall be permitted finally to carry the extension of local treatment. The responsibility of the surgeon has certainly become greater since the introduction of the antiseptic method. Many a difficult operation is now deemed admissible, nay, necessary, for the cure of even internal affections. The advanced practice of antiseptic surgery renders us, in many instances, also less sensible how narrowly our diagnostic knowledge is limited. An exploratory puncture or incision may be made with impunity, and a more accurate judgment thus formed of the nature of dubious cases.

Who could enumerate all the improvements which, thanks to the antiseptic method, have, during the past decades, been made on the old plans of treating so many diseases, and especially those attacking the abdominal organs?

Let us but call to mind the tortures produced by floating kidneys, and our former impotence in affording relief to our patients. In two cases in which this complaint had reached an unusually high degree, Hahn made incisions in the lumbar region, drew forth the kidneys and fastened them to the parietes of the abdomen by sutures. Both patients owed their recovery to treatment by Lister's method. In desperate cases of impacted gall stones, cholelithectomy has been performed with good success. Hepatic surgery may boast of the most brilliant results in affecting the removal of echinococci which so frequently infest that organ.

We were all recently astonished at the successful resection of parts of the stomach; and resection of the intestine is already counted among the regular operations.

We need add no further examples to show the high value of abdominal surgery. Can intra-thoracic, and especially pulmonary surgery, claim the same results?

It is true the local treatment of pleurisy has been greatly advanced during the latter decennia. The antiseptic method has also rendered the performance of several exceedingly bold intra-thoracic operations possible. Schneider and Esthlander have resected as many as nine ribs and the clavicle in addition, with a view to attain complete healing of empyema cavities.

In a case of large hepatic echinococcus, which projected into the thoracic cavity, and was covered anteriorly and laterally by thick layers of hepatic parenchyma, Volkmann resected the seventh rib and opened the pleural cavity, which was healthy and free from adhesions. Having caused a wide gaping of the thorax, he divided the thinned diaphagm with a knife, and extracted the echinococcus cyst *in toto*. A perfect recovery followed.

However, all experienced surgeons will admit that the field for operative interference is much more circumscribed in the thorax than in other parts of the body. This is especially true of pulmonary surgery, where for anatomical, physiological and, I should almost say, for purely individual reasons, the operator cannot be cautioned too much against overbold proceedings.

With regard to the question, What is to be comprised under the term pulmonary surgery? we shall, of course, be guided by the standpoint of the internal clinic. As the most simple and superficial method of surgically treating phthisis in its various stages, we might mention the application of the red hot iron to points of the skin corresponding to the affected portions of the lungs. This method was recommended by Guerin as early as 1830, and has of late been modified by Vidal. In 37 cases of phthisis out of 44, Vidal obtained good results. He thinks it possible that by this procedure the disease can be completely cured in its early stages, and that in more severe cases slowing of the destructive processes is thereby caused. I tried this method on twenty patients who presented themselves at my clinic. Nearly all of them expressed themselves well satisfied with the treatment. They were conscious that energetic and extraordinary measures were taken in their behalf. Like all energetic derivations to the skin, such superficial cauterization with the thermo-cautery is not without value as a symptomatic remedy. I have seen it followed by disappearance of pleuritic pains, catarrhal complaints, and dyspnœa for a considerable time. In a number of cases where the disease had not yet progressed too far, I succeeded in attaining a slowing of the destructive process. I cannot report

a case of complete cure. I do not, however, as yet venture to pass judgment on this method. I reserve further communications.

At all events the method of derivative cauterization, which, by the way, is older than is generally supposed, deserves further consideration. It certainly may claim the merit of having suggested deeper penetration with the cautery, even down to the pulmonary parenchyma. This method was adopted recently by Wm. Koch and Leyden in opening cavities in the lungs.

Before speaking of this method, however, I shall mention another direct interference with the lungs, viz.: parenchymatous injections. As is well known W. Koch performed acupuncture in the lungs of rabbits and dogs by means of Karlsbad needles; later on he injected an aqueous solution of iodide of potassium with Pravaz' syringe. He ascertained that by injecting into the lungs iodide of potassium solutions of various strengths, he could transform any extent of pulmonary into connective tissue. Eugen Fraenkel and Jablonowski continued these injection experiments on animals. They were considered valuable therapeutically, as it was thought that in chronic inflammatory processes with a tendency to softening and destruction, the character of the pulmonary inflammation could be altered by such treatment, and that the production of a cicatricial barrier would effectually check the spreading of the disease. A good deal of zeal and scientific treatment have been expended upon these experiments, but the fair hopes based upon them have not hitherto been realized at the bedside.

Without possessing any knowledge of Koch's experiments, I began to try a similar treatment in my clinic in November, 1872. In all sorts of cases of bronchial and pulmonary affections, I pierced the thoracic walls with the needle of the syringe and then injected variously strong solutions of carbolic and salicylic acids into the diseased portions of the lungs. These trials were discontinued but a short time ago. The injections were as a rule, borne without inconvenience in cases where all antiseptic precautions were observed. From fear of hæmorrhage I never ventured to inject directly into the cones, but confined myself to the middle and lower portions of the lungs.

Now, what has been my reward for all the perseverance and labor spent, during the past ten years, upon this method of treating "pulmonary affections?"

In not a single instance, cases of pulmonary echinococci excepted, did the results obtained justify my expectations. I was never able to alter the character of the inflammation, to induce cicatricial shrinking, nor to bring about a termination of the process by complete healing.

In putrid bronchitis, and in one case of pulmonary abscess, continued injections of a concentrated solution of salicylic acid produced a temporary change in the fetid sputa, which, however, soon regained their former offensiveness. In acute pulmonary gangrene no effects whatever were perceptible; probably because the quantity of fluid injected was insufficient for disinfection of the affected parts. I warmly wish that others who have tried this method may report better success. From Koch and Hiller's experiments, it appears that even tincture of iodine can exert no shrinking influence on tuberculous tissue.

Pravaz' syringe, cautiously introduced into the pleural cavity and lungs, has rendered excellent service in diagnosing the affections of these parts; but it can no wise be stated that the injection of medicated solutions into infiltrated and cavernous lungs has proved a therapeutic success.

Just ten years ago, at the congress of German naturalists and physicians held in Wiesbaden, I read a paper on the local treatment of cavities in the lungs. In order to accomplish healing of bronchectatic cavities, I first aspirated the contained secretion, and subsequently injected medicated solutions. In some cases I allowed the canula to remain in the wound for several days, intending to wash out the cavity with frequent injections. Pepper tried the same simple method, but neither he nor myself have succeeded in rendering it efficacious in the healing of pulmonary cavities.

On this account I began to lean more favorably towards the old idea of opening pulmonary cavities by incisions through the chest walls. I reported such an operation in the above mentioned paper.

This idea of treating cavities in the lungs according to surgical principles is as old as is the science of medicine. Wm. Koch, in an excellent historical essay, has given us a review of the past achievements of thoracic surgery, and I shall therefore omit all mention of historical data.

Fenger and Hollister have recently pointed out as a merit of my paper, that it more than any preceding communication on the subject, has called general attention to the local treatment of pulmonary cavities, and that it has encouraged the making of further attempts in this direction. It is true that during the past ten years, pulmonary surgery has been advanced more in an experimental way than at any time before; but therapeutic effects are as yet exceedingly sporadic. The patient on whose lungs I operated ten years ago, and whose case I reported, likewise died a short time afterwards. The autopsy showed that in spite of the surgical treatment of the bronchectalic cavities, the disease had spread to the neighboring lungtissue and produced general tuberculosis.

In another case treated in my clinic there was a large bronchectatic cavity in the upper lobe of the left lung. On the 14th January, 1875, my colleague, Dr. Hueter, whose early death we all deeply deplore, made a somewhat extensive incision through skin and muscles down to the pleura. The anterior wall of the cavity was carefully bored with a pair of forceps (Kornzange), the contents evacuated, and a canula inserted. Through it solutions and powders were introduced for a considerable length of time. The granulations developing in the depth of the cavity, necessitated gradual shortening of the canula, till finally it could no longer be introduced.

Air and secretion now had ceased to pass through the wound, which healed up completely. All tym-

panitic sounds and râles had disappeared. A gradual contraction of the thoracic wall was noticeable in the region over the cavity. Percussion was endured without any pain being felt whatever. The retraction of the lung caused a greater extent of cardiac dullness, and the sounds of the heart had become louder. As patient had, in a great measure, recovered his former strength and weight, and as he complained no further, he was dismissed from my clinic towards the end of March. His condition was such as to enable him to resume his occupation.

This result seemed to justify our hope that pulmonary cavities would prove amenable to local treatment. Unfortunately, before the lapse of eight months this patient applied for re-admission to my clinic. He was again troubled with complaints of the chest, want of appetite, and insomnia. On auscultation of the left supra and infraclavicular regions, tympanitic sounds and râles were again detected. Commencing dullness showed that the cone of the right lung had likewise become affected. The patient expectorated an abundance of purulent substance, and had a tormenting cough, poor appetite and albuminuria. Profuse diarrhœa, acceleration of the destructive process in both lungs, accompanied by intense fever and dropsical symptoms, caused patient's death on March 25, 1876. The post-mortem examination revealed general tuberculosis, with amyloid degeneration of various organs.

This ill success of a case of surgical treatment of a bronchectatic cavity, all circumstances being apparently so favorable, will always be considered of importance as an interesting therapeutic problem. Who will henceforth venture to decide whether a bronchectatic cavity in the cones of the lungs is still perfectly circumscribed? whether the remaining pulmonary parenchyma is still perfectly intact?

Balmer and Fraentzel's valuable examinations of sputa may be considered a first attempt to distinguish, during the life of the patient, between all the manifold processes which are still confounded with tuberculosis and tuberculous phthisis. Let us hope that R. Koch's great discovery will, in this direction, continue to grow in fertility.

For all pulmonary cavities resulting from tuberculosis, or such as are usually complicated thereby, will have to remain a *noli me tangere* to operative interference, until proofs will have been produced of the existence of antiseptic agents which will destroy or arrest the growth of specific pathogenous fungi, and in particular of the bacillus tuberculosis.

In the meantime, however, we need not wholly abandon our endeavors to advance the department of pulmonary surgery.

A number of non-tuberculous cavities are found in the lungs, and these, if judiciously selected, promise amply to repay the labors of the operator.

I shall first mention echinococcus of the lungs. I am at present occupied with a monograph on this subject, as fourteen cases of this affection have come under my treatment and observation. In the treatment of this disease the value of local treatment has become strikingly apparent. A Ruegen landholder, whose left lung was the seat of an echinococcus, came to my clinic in 1875. He was treated for a considerable time with injections of carbolic acid. A year and a half later, desiring to let me know how completely he had been cured, he wrote to me that a child had been born to him, and that both father and son enjoyed the most vigorous health. They have enjoyed it up to the present day.

George Wisee, æt. 24, whom you here see sitting before you, was admitted to my clinic on July 6, 1882. The symptoms were fever, pain in the chest, bloody expectoration and spasmodic attacks of coughing, during which large cysts of echinococci were thrown up. On percussion I discovered a tract of dullness, about the breadth of a hand, stretching over the back from the right axilla to the spine. The stethoscope applied to the same region revealed, indistinct in some places, bronchial breathing, and at the end of the inspiration, a small mucous tinkling. The liver was of normal size. I ordered inhalation of oleum eucalypti. Between the 7th and 13th of July patient coughed up nineteeen echinococcus cysts varying in size from that of a pea to that of a hen's egg. I have the honor of laying them before you.

I concluded to have the patient operated upon. On the 18th of July my colleague, Dr. Vogt, resected, in the tract above described, apiece about four c. m. in length, of the sixth rib.

We could easily satisfy ourselves of the existtence of adhesive pleurisy. A trocar of the length of a finger and of medium diameter was thrust into the pulmonary parenchyma in three different directions. We hoped thereby to evacuate the contents of the echinococcus cyst, but all that escaped was a small quantity of frothy blood. We interfered no further for the present. The part was dressed antiseptically, and, consequently, the process of healing went on wholly unattended with fever. No other secondary hæmorrhage nor hæmopsis occurred. After 24 days the wound had healed completely. Patient coughed less and expectorated no more echinococcus cysts. A local examination showed but slight alterations.

As patient was apparently cured, he was dismissed from my clinic on August 28. We were, however, disappointed in our hopes of his full recovery.

About the middle of September, Wiese again coughed up a pretty large cyst of echinococci, and this was repeated twice during the following week. Being directed to return to my clinic, he was readmitted October 2. The symptoms were similar to those existing before the first operation. As this had taken so favorable a course the patient willingly consented to a repetition. This time we employed the thermo-cautery. On October 20, my colleague, Dr. Vogt, resected the seventh rib, near the seat of disease, and, perforating the bared pleura with the cautery, pushed it into the lung. We enlarged the opening in shape of a funnel with our carbolized index finger, and believed we were feeling a tensely filled cyst. We therefore burned deeper with the cautery, hoping thus to empty the cyst of echinococci. This, however, we failed to accomplish. We carefully washed out the large funnel-shaped canal we had

made in the lung, and inserted a drainage tube, expecting a subsequent evacuation of the cyst contents.

All precautions of antiseptic treatment were observed. The patient had been kept under the influence of the anæsthetic for about an hour, and the operation was borne as easily as the first one. Temperature in the axilla towards evening, 37.8° C.; pulse, 88; breathing 20. The temperature did not rise a single time during the following days. The pulmonary fistula was washed out daily with a one per cent. solution of salicylic acid, and antiseptic dressings were applied. The wound had an excellent appearance, and granulations soon developed in its depth. No echinococcus cysts have since been evacuated through the wound, nor have any been coughed up.

The wound was closed by December 1, and on the 10th of the same month Wiese was dismissed. Since March 1 he has been employed as nurse in my clinic. Notwithstanding the hard work he performs, he has no chest complaints. I have brought him with me from Greifswald, that you may all be convinced of the good results obtained by the operative treatment of pulmonary echinococcus. In this case I suppose the cyst was obliterated by cicatrical contraction of the inferior lobe of the lung. According to my views this clearly proves that the future will derive great benefits from pulmonary surgery.

Fenger lately reported a case where he opened an ichorous abscess in the middle lobe of the right lung by an incision, and through it extracted the echinococcus cyst which had caused the suppuration. He effected a complete cure.

Such operative results obtained in cases of pulmonary echinococcus, indicate that canals may also be burned into the lungs with the actual cautery, and subsequently enlarged in shape of a funnel with the index finger, for the purpose of removing such foreign bodies as fail to find an exit by the natural passages of the bronchi, and by their presence induce putrid bronchorrhœa, suppurative infiltration, or even gangrenous destruction of the neighboring pulmonary parenchyma. Wm. Koch has made a similar suggestion, but no case of an actual trial has as yet come to my knowledge. A recollection of my youth induces me to renew this suggestion. When "practicant" at Wernher's clinic in Giessen, I had occasion to observe a case where a woman had had a tooth pulled, which slipped into the trachea and became lodged in the lungs. The accident was followed by attacks of spasmodic coughing, a painful sensation at a certain spot on the right side of the chest, dullness over the lower lobe of the right lung, frequent chills with purulent fetid sputa, violent dyspnœa, intense fever, sweats and profuse diarrhœa. The patient presented a picture of disease which, by its excess of tortures, produced a lasting impression on my mind.

Twenty-four hours before death, which occurred on the twenty-third day of the disease, she expectorated the tooth she had swallowed, together with numerous coagula of discolored blood. Unfortunately, it was too late.

The autopsy showed a suppurative spot, where the tooth had probably been arrested, in the depth of the right bronchus, diffuse putrid bronchitis and numerous gangrenous foci in the right lung. At that time nobody did think, nor could anybody have thought, of operative interference. But if I should to-day be called upon to treat a similar case of pneumonia (Schluck-pneumonie), the experience I have since had would induce me seriously to consider the advisability of an operation. In cases of acute pulmonary abscess, and for other reasons in cases of acute pulmonary gangrene where there is mortified putrid tissue which has not yet been sequestered and discharged, I agree with Wm. Koch in advising complete cauterization of the gangrenous portion of the lung as soon as possible.

The operation is likewise indicated in cases of chronic pulmonary gangrene, especially in that variety of the disease in which the existence of bronchectatic sacs is, after some time, followed by expectoration of large quantities of putrid secretion. The internal treatment, as is well known, has effected absolutely nothing in the advanced stages of the disease, which was looked upon as incurable.

I was prevailed upon by this consideration to try the operative treatment on a boy of fourteen, who for a number of years had suffered from sacciform bronchectasia. He was admitted to my clinic October 19, 1882, on account of septic fever and expectoration of large quantities of pus mixed with dark black shreds of gangrenous lung tissue. All internal medication had been tried in vain. After some hesitation we determined to operate on him on December 23. The operation was entrusted to the masterly hand of my colleague, Dr. Vogt.

A cavity had been detected in the superior lobe of the left lung. Over this cavity, in the anterior portion of the third intercostal space, an incision running parallel with the ribs was made through skin and muscles. We then resected a three cm. piece of the seventh rib, perforated the thickened pleura with a Schede's trocar, and employed Paquelin's thermocautery in boring the lungs. A brownish red liquid escaped, which was of carrion-like odor. Having dilated the opening in shape of a funnel, we discovered by digital exploration a cavity of the size of an apple, with a number of recesses. Several bronchi, which were so large as to admit one finger, entered this cavity. The tissue surrounding it was exceedingly flabby. The gangrenous portions were cauterized as completely as possible, and after we had washed out the cavity repeatedly with a solution of salicylic acid we introduced a pair of very long forceps in a direction backwards and downwards. Opposite the point of the forceps, about three c.m. below the angulus scapulæ, having cut through the integument and muscles, we resected subperiosteally two pieces, each two c.m. in length, of the eighth and ninth ribs respectively. The forceps (Kornzange) were now used as a guide director for the cautery, which soon entered a large cavernous space. About 300 c.c.m. of an extremely fetid, semi-liquid mass together with numerous shreds of necrosed lung tissue ran out of this cavity in a stream. We cauterized the gangrenous walls of the

space and then pushed an elastic drainage tube of medium size along the forceps through both pulmonary lobes in a direction forwards and upwards as far as the third intercostal space. The cavities could now be washed out and disinfected perfectly. All precautions were observed in applying an antiseptic dressing.

The condition of the patient was very satisfactory during the following afternoon; coughing and expectoration had ceased entirely. Temperature towards evening 37·5; pulse 116; breathing 30. Patient had recovered from the operation, and complained merely of the inconvenience of the dressing and of stitches in the wound. Patient's condition remained favorable up to Dec. 24. He then grew suddenly worse, after the cavity had been washed out through the tube with a solution of thymol and boracic acid, besides salicylic acid. It seems that the bronchi and lungs possess an idiosyncrasy with regard to thymol and boracic acid. Their application was immediately followed by laryngitis, tracheitis and bronchitis. In spite of all remedies employed to neutralize these effects, death occurred on Dec. 30. I lack time to communicate to you the detailed results of the autopsy; I shall merely state that it revealed the important facts of a correctly formed diagnosis and of a technically successful operation. Under similar circumstances Ed. Bull, of Christiania, attained a favorable termination. In a girl aged 23, who suffered from putrid bronchitis, he succeeded in completely healing a gangrenous cavity by the operative treatment. In his case the cavity was likewise situated in the left lung. This seems to support my assumption that the unfortunate issue of our case is not to be attributed to the operation, which, as such, was successful, but to the antiseptics employed, which seem to possess properties injurious to the lungs and bronchi. It is therefore an important task to ascertain a technical procedure by which we shall be enabled to protect our patients from the above mentioned evil consequences.

The technics of pulmonary surgery deserve special consideration. For obvious reasons I omit, in this place, to discuss them fully. I shall merely remark that besides incision and subsequent penetration with a pair of forceps, my experience so far has led me to regard cauterization with the thermo-cautery and washing out with salicylic acid as of prime importance. I do not think that pulmonary resection is suitable to the human subject. It is to be rejected entirely in cases of phthisis. The first attempt of this kind turned out so exceedingly sad that every sensible surgeon will desist from further trials.

I have come to the end of my paper. Looking backwards into the past decade, it seems to me that pulmonary surgery has been somewhat advanced. Where will it stand ten years from to-day?

Others will then report its development. For this important question must and will be grappled with. I merely wish to add one warning, and that is not to hope too sanguinely nor to proceed too boldly in the domain of pulmonary surgery. If anywhere, we may certainly here apply the old adage, *Non cito sed tuto.*

STRAIGHTENING THE NASAL SEPTUM.

BY DUDLEY P. ALLEN, M.D.

Lecturer on Minor and Orthopedic Surgery in the Medical Department of Western Reserve University, Cleveland, O.

A case of displaced nasal septum successfully operated has seemed of sufficient interest to be reported. The patient, aged 23, had, when a boy, fallen, striking his face upon a beam. His teeth were loosened and his nose badly injured. When I saw him, some months since, the right nostril was wholly closed by the septum being pushed over to that side, so that no air was inspired through that nostril. Both the cartilagnious and anterior portion of the bony septum were thus displaced.

Rhinoscopic examination showed the posterior nares to be in a normal condition. The septum was firmly fixed in its displaced position, so that it could not be forced back by the thumb pressing firmly upon it.

The same injury which had displaced the septum to the right had displaced the extremity of the nose to the left, so much so as to disfigure the face. The patient's voice also had a nasal quality.

An operation was undertaken, having for its chief object to straighten the septum, and thus remove the obstruction to respiration.

For the operation a pair of forceps were obtained patterned after those described by Dr. Wier, of New York, in the *N. Y. Med. Record* of March 13, 1880. These are forceps with long handles, about the size and strength of small tooth forceps. The blades are about two inches long and one and one-half inches wide at the shank, tapering toward the tips. The blades are flat, so as to slip into the anterior nares, one on either side and their inner surfaces are smooth, so as not to lacerate the mucous membranes covering the bony septum. The blades do not close entirely together. I had the shanks spread a little apart, so as not to injure the anterior portion of the septum, as the blades grasped the inner portion.

The patient was etherized, and with these forceps forced into the anterior nares the septum was grasped and broken over to the left side.

A space was thus easily gained, so that the finger could easily be inserted into the right side. There was scarcely any hæmorrhage.

A rubber tube was then placed in both nostrils, and the right side was firmly packed with lint soaked with oil, thus holding the septum well over to the left side. Enough lint was placed in the left nostril to hold the tube on this side in place. The dressing was left in place three days. It was then removed, and an abundance of air entered through the nose. The nose after this was syringed out daily, and a small amount of packing was constantly replaced to hold the septum in its new position.

The patient was obliged to leave the hospital at the close of one week, so that after this time the packing was not efficiently kept up, and as a result, after about one month the cartilaginous portion of the septum

began to bulge somewhat into the right nostril again.

At this time, without ether, the portion of the cartilaginous septum projecting into the right nostril was transfixed with a pointed bistoury and cut away. The bony portion of the septum showed no tendency to resume the position it occupied before operation. The removal of the projecting cartilaginous portion of the septum in this manner made a small opening between the two sides of the nose. It allowed, however, the free passage of air through both nostrils. The operation accomplished more than was anticipated. It had not seemed practical at the time of operation to force the septum to the left and the point of the nose at the same time to the right, so that the latter was not attempted. As the opening which had been made by the bistoury between the two nostrils contracted during cicatrization, however, the effect was to pull the point of the nose back to its normal position. After nine months the result of the operation is that the patient breathes with perfect freedom through both nostrils. The point of his nose is much nearer the median line than before the operation, resulting from the contraction of the opening made in the septum.

The voice still has something of the nasal quality, but the improvement in this respect is perceptible.

MALARIA.

BY ERWIN F. SMITH.

In connection with the recent discussion of malaria by the American Public Health Association, it is interesting to note the conclusions reached by Prof. C. Tommasi-Crudeli, of the University of Rome, as to the causation and prophylaxis of fever and ague. These conclusions, first published some years since, have beeen reaffirmed recently in a study on "The Preservation of Man in Malarial Regions," published by the Italian government.

Tommasi-Crudeli believes malarial fevers are caused by a bacteric ferment which grows in the soil, and thence finds its way into the air. Both he and Klebs think they have discovered a specific intermittent fever germ, which they have christened bacillus malariæ. This germ is not of necessity paludal in origin. He seems to have established beyond a doubt that there is no cognate relation between marshes and malaria—some marshes, though filled with decomposing vegetation, are innocent, while many comparatively dry and even barren districts give forth rank malarial emanations.

The essential factors in the production of malaria are three: (1) Moisture in the surface soil, a slight amount being sufficient, if the ferment is present; (2) A temperature of at least 36° C.—it is well known that malarial regions become wholesome whenever freezing weather sets in; (3) the presence of cold air, upon the oxygen of which the ferment depends for growth. If any one of these three conditions is wanting, the development of the malarial poison stops.

The methods suggested for preventing the growth of the malarial ferment are: (1) A high cultivation of the soil, which in some places has proved highly successful, while in other places it has been a partial or complete failure, if not a cause of increased production of malaria; (2) Some system of drainage, which to be successful must be extensive and thorough, the ground water being lowered and kept at such a level that the surface layers of the soil are always practically dry; (3) The covering of infected layers of soil with earth or water, so that the ferment shall not be in contact with the oxygen of the air. If the district is marshy, the latter may frequently be best done by flooding. The entire marsh should be kept completely and continuously under water. If this be done, the production of malaria ceases, but recommences whenever any portion of the infected soil is again exposed to the action of the air. Here, no doubt, is an explanation of the otherwise inexplicable sudden increase of malarial fevers, in summer and fall, in the vicinity of certain lakes and millponds, whenever the waters are drawn off and the sides and bottom left exposed for some time to the action of sun and air. If the malarial district is not marshy, and cannot be conveniently flooded or covered with layers of non-malarious earth, the same end (the starvation of the bacteric ferment by the withdrawal of the oxygen of the air) may be attained by allowing the soil to become grassed over with a thick turf; or in towns by the construction of buildings and pavements, as demonstrated in certain quarters of Rome.

If none of the foregoing preventive measures can be adopted, partial immunity from malarial poisoning may be obtained by avoiding exposure to infected air in early morning and in the evening when malarial influences are believed to be most active; and by sleeping in upper stories of buildings, or, if this be impossible, by securing air for the ventilation of sleeping apartments from some distance above ground (4 to 5 meters). The habit of sleeping at some distance from the ground is common among the modern Greeks and some Italian races, who are compelled to live in malarial places, and there is reason to believe that in infected districts those who sleep some distance above the lower stratum of atmosphere enjoy a greater immunity from malarial fevers than those who sleep on or near the ground.

The malaria of the Roman Campagna is so virulent that whole districts are practically uninhabitable during the warm months, and bad seasons are marked by many deaths. The number of deaths, however, is not a proper criterion for judging of the miseries of the rural Italian population. To appreciate their condition one must be conversant with the great and pitiful physical deterioration going on in whole communities under the influence of chronic malarial cachexy. Any method of removing this scourge would be a great boon to Italy. Various medicinal agents, as quinine and eucalyptus, have been tried with but limited success. Quinine is often injurious, and much too expensive; while the euclayptus, so much vaunted as a preventive, especially in the vicinity of Tre Fontane, where there are extensive groves

under the care of the Trappist monks, has entirely failed to meet expectations. For some years after the groves were planted, Tre Fontane enjoyed an immunity which was attributed to the eucalyptus, but in 1880 the locality was terribly scourged by fever under the very shadow of the groves, and again in 1882. Last year, however, the experiment of using white arsenic as a prophylactic was tried on a large scale, and with the happiest results. In districts of the Campagna where experience has shown it to be well nigh impossible to remain during the warm weather on account of the fevers, by the daily use of small quantities of arsenic, large bodies of railroad employes were enabled to work almost interruptedly throughout the bad season. No ill effect was experienced from the use of the mineral. Experiments on a large scale will be continued to determine the exact value of arsenic. Italy experiences great financial loss on account of malaria, and the Italian government, aware of this has, with commendable good sense, set her *savants* to discover the remedy. The report of this year's investigations will be awaited with interest.

A CASE OF TRIPLETS.

BY C. W. COOPER, M.D., BATAVIA, ILL.

About 8:30 on the morning of May 13, 1882, I was called to attend Mrs. N. in confinement. She was a Swede, age 40, a multipara. I found the membranes protruding from the vagina, and a foot just within. Her pains were not very severe. From all appearances I was satisfied there were twins. I ruptured the membranes, when a large quantity of fluid escaped. The pains now became stronger, but the foot did not descend much. The mother was weak from the burden she had been carrying, and from her inability to lie down, which had now existed nearly a month. By pressure upon the abdomen and slight traction upon the foot I assisted the delivery, which was accomplished a few minutes after nine. The child was a boy weighing 6½ pounds. The second child presented the vertex and was delivered naturally at 9:45. This also was a boy, and weighed 7½ pounds. Placing my hand upon the abdomen to insure uterine contraction, I was not a little surprised at the size and hardness of the uterus, and by vaginal touch I detected a third child lying directly across the pelvis, with membranes intact. The head was to the left and too far away to warrant the hope of getting it down. I introduced my hand into the womb and had the good fortune to readily seize both feet. This third child was delivered at 10:30. It was a girl weighing 5¾ pounds. A single dose of ergot was followed by good uterine contraction, and Mrs. N. recovered from her confinement promptly. The children are all living, hearty, robust, and as forward in every respect as the average of children of their age.

BATAVIA, ILL., Mar, 20, 1884.

MEDICAL PROGRESS.

MEDICINE.

INTRAVENOUS INJECTION OF MILK.—Dr. Miglioranza gives the results of a series of experiments on dogs in the *Archives Italiennes de Biologie*, which are referred to in an editorial by the *Lancet*. He takes the ground that milk must be first digested to be properly prepared for the blood, and if it be injected as milk it will simply give up its albuminoid and fatty matters to the kidney, to pass out by the urine. He says that transfused sugar of milk passes in part into the saliva, as dogs afterwards lick their lips on account of the sweet taste. The butyric element of milk, transfused without a previous digestion, produces fatty infiltration of the kidneys and chyluria. In the treatment of cholera the serum of milk may be used to advantage, but not pure milk. The sudden introduction of a large quantity of milk into the circulation produces great diminution of blood pressure, due to collapse of the force of the cardiac systole, and unless the milk be filtered to prevent corpuscles larger than those of the blood from entering, obstruction may ensue in the pulmonary and cerebral circulation. As to the injection of the serum of milk, Albertoni has injected from 9 to 100 grammes into the veins of dogs without observing any ill effects. Casein, after being digested, if introduced directly into the blood is more apt to be transformed into urea than into nutrient material. Fresh urine may be directly injected into the blood without causing poisonous symptoms, but if decomposition has commenced serious symptoms immediately follow. Carbonate of ammonia introduced into the blood, notwithstanding the opposite statement of Ritter and Feltz, produces symptoms that precisely resemble those of uræmic fever, viz.: tetanic convulsions, dyspnœa, excitement of the circulation, hyperæsthesia, and coma.

CALCIFICATION OF THE PLEURA COSTALIS.—At the post-mortem examination of a man who had died of cancer of the stomach at the Hôpital St. Antoine, M. Gilbert found a thick plate of bone-like material covering the internal surface of the ribs on the right side, from the sternum to the vertebral column. This plate measured 12 centimeters in height, and 20 in breadth. Its external surface was smooth and separated from the ribs by connective tissue, while the internal was rough, and adherent in some places to the lung. Chemically, the plate had very nearly the same composition as bone, but the microscopical examination showed that it was only fibrous tissue loaded with lime salts.—*British Medical Journal.*

THE MICRO-ORGANISM OF BERI-BERI.—M. de Lacerda, in examining drops of blood from individuals suffering from beri-beri, has found long, cylindrical branched filaments with genuine joints, and sometimes with refracting brilliant points, which are believed to be spores. These filaments have been cultivated in bouillons prepared after Pasteur's method

with all the proper precautions. Rabbits have been inoculated from the artificial cultures, and have succumbed with all the symptoms of beri-beri. The microscope has shown the organisms in the blood, urine, muscles and spinal cord of the rabbits. M. de Lacerda believes that the parasite is originally obtained from rice which has undergone a peculiar alteration.—*Lancet.*

The Medulla Oblongata in its Relations With Sexual Disorder, and on Local Blood-Letting as a Means of Treatment.—Dr. Alexander Harkin, in the *Practitioner*, discusses this question by first calling attention to the centers already located in the medulla by physiological research, giving it as the seat of what he calls instinct, then refers to observations in hanged persons, irritation in idiopathic mania, and in injuries of the part, where erections and emissions have occurred; and to experiments by galvanic stimulation where in pregnant guinea pigs movements of the uterus or tubes, in the dog and in the rabbit erections, have been produced. He considers it to be established that the proximate cause of epileptic convulsions lies in the pons and medulla oblongata, and calls attention to the prominent place which sexual excesses hold in the ætiology of epilepsy and a large class of allied neuroses and neuropathic disorders. The saying of the older observers that "*coitum parvam esse epilepsiam*" contains a certain amount of truth; almost every fit of epilepsy terminates with seminal emission, and Nothnagel asserts that it is known that in some individuals the first coitus provokes a seizure, which is subsequently repeated every time.

Taking all this and more into consideration, he thinks it not difficult to demonstrate the existence of a mutual causal relation between a congested condition of the medulla oblongata and that disease denominated "neurasthenia spinalis" and also that of "abnormal seminal losses." Pathological demonstration is difficult, as no one dies directly from either, and the hyperæmias and congestions of the bulb are often of a transitory nature, and do not always present a perfectly satisfactory autopsy; but reasoning from analogy, and taking into account the nature of the microscopic appearances frequently presented in a disease in the same category, viz.: epilepsy, we may fairly assume, along with the congestion of the medulla common to both during life, the co-existence in its structure of the histological changes found in fatal cases of epilepsy. Thus he appeals to the results of clinical observation, to a pathology founded on the patent phenomena of the disease, and to a plan of treatment in accordance with the pathological view. That this mutual casual relation is in operation we may satisfy ourselves by reviewing the order observed in the development of the phenomena under consideration: how at one time the lower sexual center situated in the lumbar plexus, stimulated by peripheral irritation of the organs, reacts upon the higher center in the medulla oblongata; at another the higher center originates the force and evokes the functions of the lower center, which in their turn, often independently of the will and while the patient sleeps, are in ever frequent activity in the neuropathic constitution. There is thus established a vicious circle of cause and effect.

In illustration of these views, Dr. Harkin gives three cases in which relief to symptoms so commonly recognized as following after excessive masturbation was afforded by local treatment to the regions about the medulla, such as wet cups to the nape of the neck close to the occiput, and the cold douche to that region, bromide of potassium and belladonna being given in the general treatment. Dr. Harkin ignores the local and mechanical surgical treatment as applied to the genital organs, as being barbarous and false in pathology.

SURGERY.

A Case Where a Piece of Rabbit Bone Passed from the Intestines into the Bladder.—Mr. Reginald Harrison reports, in the Liverpool *Medico-Chirurgical Journal*, the case of a man 50 years of age, who for several months had suffered from intestinal irritation; for six weeks he had noticed that his stools were not formed, and that his bowels were more or less loose. Three weeks previously his bladder became exceedingly irritable, and he often experienced severe pain in the lower part of the abdomen. Urine coutained a considerable quantity of matter. The act of micturition terminated with a sort of fizzing sound, and bubbles of air were largely mixed with the urine. Palpation detected a hard, cricket ball sized tumor at the fundus of the bladder; the sound revealed nothing. Urine contained striated muscular fiber and vegetable cells, then pus-crystals of phosphates and uric acid, bacteria, and fungi spores. Later the urine was slightly discolored with fæcal matter, and contained many of the elements of food. At this time a mass about the size and shape of a bean three-quarters of an inch long was passed by the urethra, was followed by relief, but air continued to pass out with each act of micturition. The mass was examined, and found to be the expanded end of a rabbit's femur. This occurred in June, 1883, and improvement was marked to November, 1883, when the only inconvenience was the presence af air and a varying amount of fæces in the bladder, which fæces sometimes obstructed the urethra, thus causing inconvenience. To relieve this the patient was directed never to hold his water longer than two or three hours. The bowels were kept slightly under restraint with opium, and a soft rubber catheter was occasionally introduced, and the bladder and urethra washed out with a small quantity of tepid water. October 27, 1883, he gave every indication of being perfectly well.

Mr. Harrison concludes that the piece of rabbit bone had probably become impacted in the transverse colon? there kept up a chronic inflammation and thickening, which eventually resulted in the gut becoming adherent to the bladder. The constant contraction of the bladder for purposes of micturition, precipitated events by drawing down, and possibly pouching, that portion of the intestinal wall in

which the bone was impacted. In this way it is almost certain that the foreign body became, as it were, sacculated, with but little communication with the general cavity of the intestine. Then suppuration took place, and in turn the bone remained fixed in the bladder wall, where it set up and maintained a constant state of urinary irritation. After a lapse of some little time the foreign body fell within the cavity of the bladder, from whence it was expelled through the urethra.

Congenital Absence of Uterus, Ovaries and Vagina.—Temulji Briekaji reports a case to the Medical and Physical Society of Bombay, (Transactions), in a married woman 19 years of age, stout, fat, but of stunted growth. Breasts well developed, but no glandular structure in them. External parts normal; in the place of a vagina a mere *cul-de-sac* half an inch in length. A finger in the rectum touched a round, bony tumor of the size of an orange projecting from the promontory of the sacrum; the finger touched readily the point of a female catheter introduced into the bladder. No uterus or ovaries could be made out. The patient having come for the purpose of having a passage made, was told it would be death. Three months later she reappeared, saying that a Mahomedan midwife had made a passage, and wanted to know whether everything was all right. It seems that the midwife came daily for three months and forced a small wooden plug into the orifice. There was a great deal of watery discharge, but no suppuration, and for the first time, they said, she passed menstrual blood. On examination the finger passed through the *cul-de-sac* into the bladder, the urethra being so much dilated as to allow the entrance of the finger in that direction, also into the bladder, where it touched readily a finger passed into the rectum. The menstrual blood came, of course, from the laceration of the parts. The girl seemed very fond of her husband and said she had sexual desires. Her sister had a normal development of the genital organs, but the breasts were absent.

Case of Supposed Prolonged Gestation.—Dr. James Arnott reports a case to the Medical and Physical Society of Bombay, (Transactions), of a patient whose mother had fourteen pregnancies, all extended beyond their natural term. The patient herself, was in her seventh pregnancy, and was delivered twelve months after menstruation had ceased. Quickening took place at the fifth month. She was delivered of a twelve-pound, still-born, malformed child, the malformation consisting of an arrest of development of the bones at the vertex of the skull. Of her previous pregnancies, her first was a girl, born at the normal time, her second was a boy, born after ten months' gestation, and of unusual size. The third and fourth, also boys, were born after ten months' gestation, but presented no unusual appearance. Her fifth child, also a son, was born at 10 months. Her sixth was born a little after full time.

A Living Child after Craniotomy.—At the meeting of the Royal Society of Physicians of Berlin, Dr. Breus exhibited a living child, 18 days old, on whom craniotomy had been performed. The conjugate diameter of the mother was 9 ctm., (3½ in.). On extraction by the forceps the left frontal bone was fractured during its passage over the promontory, the child, born asphyxiated, quickly recovered without any paralysis and without pyrexia. The mother also made a good recovery.—*Medical Press.*

TOXICOLOGY AND MEDICAL JURISPRUDENCE.

Recovery from Chloral Poisoning.—Dr. Paolo Rossi publishes (*Gaz. degli Ospitali*) a case of poisoning by ʒvij of chloral hydrate, which is chiefly interesting on account of the recovery of the patient. The patient was a young man, aged 25, who took ʒvij of chloral hydrate dissolved in water half an hour after eating. About half an hour afterwards ʒj of cherry laurel water was given. Two hours after the ingestion of the drug the patient was seen by Dr. Rossi. At that time the patient had the appearance of one attacked by severe cerebral hæmorrhage. The face was congested, the respiration stertorous and 32 per minute, pulse small and 132. The temperature was normal. Cutaneous anæsthesia; muscular relaxation was complete; the pupils were contracted, but mobile. There was no vomiting or purging. The cherry laurel water had had no effect. Vomiting was produced by titillation of the fauces. Twenty-eight sinapisms were applied, and ♏xv of ether were injected hypodermically; an ice-bag was applied to the head, and a clyster of ʒvj of alcohol was administered. About two hours afterwards he began to move his arms. Little by little he began to move his body, and finally sat up. On the next day a large dose of the citrate of magnesia was administered, which produced four or five evacuations.—*Medical News.*

ANATOMY AND PHYSIOLOGY.

The Chorda Tympani Nerve.—Dr. Sapolini, of Milan, considers that this nerve contains motor and sensory fibers. Its deep origin is placed about the posterior end of the floor of the fourth ventricle. It leave the surface of the pons quite close to the auditory nerve, with which it exchanges many filaments. It is composed of two filaments, which pass in close union with the portio mollis and portio duram through the internal auditory meatus.

Arterial Pressure.—The *British Medical Journal* refers to the address of Dr. C. S. Roy at a recent meeting of the Royal Medical and Chirurgical Society, upon arterial pressure, in the experimental analysis of which he has been engaged during the past few years. He exhibited a group of instruments used for the purpose, and especially one for measuring arterial elasticity, one for measuring the volume of organs, and a cardiometer. His conclusions are that there exist in the vagus nerve-fibers decreasing the

force of cardiac contraction distinct from the fibers that diminish the frequency of the beat, and, similarly, that there exist in the accelerans cordis fibers augmentative of force distinct from fibers increasing the heart's frequency.

PHYSIOLOGY.

ON A "RENNET" FERMENT CONTAINED IN THE SEEDS OF WITHANIA COAGULANS.—Professor Michael Foster communicates to the Royal Society of Soudan the experiments made by Sheridan Lea on this subject (Proceedings). It seems that in India cheese made with animal rennet is unsaleable among the natives, so attempts have been made to discover a suitable vegetable rennet to meet this objection. This has been found in the fruit of puneeria, now withania, coagulans, a shrub common in Afghanistan and Northern India, an aqueous extract of the seed capsules of which does somewhat rapidly coagulate milk.

The material supplied to Mr. Lea consisted of an agglomerated dry mass of seed-capsules and stalk fragments. On proper preparation the seeds, enveloped in a coating of resinous material, the dried juice of the capsules, could be separated from the rest. It was then found that a 5 per cent. sodic chloride solution was the most efficient in the extraction of the active principle from the seeds, which is soluble in glycerine, and possesses strong coagulating powers even in small amounts. Alcohol precipitates the ferment body from its solutions; and the precipitate, after washing with alcohol, may be dissolved up again without having lost its coagulating powers. The coagulation is not due to the formation of acid by the ferment. If some of the active extract be made neutral or alkaline and added to the neutral milk, a normal clot is formed, and the reaction of the clot remains neutral or faintly alkaline. The clot formed by the action of the alkaline is a true clot, resembling in appearance and properties that formed by animal rennet, and is not a mere precipitate.

A deep brown coloring matter pertaining to the seeds was with difficulty got rid of. When 40 grms. of the prepared seeds were treated with 150 cub. centims. of 5 per cent. sodic chloride solution, they gave an extract of which 0.25 cub. centim. clotted 20 cub. centims. of milk in 25 minutes, and 0.1 cub. centim. clotted a similar portion of milk in one hour; the curd formed being quite white.

A portion of the extract given to a professional cheese-maker, was used satisfactorily as a substitute for animal rennet in the preparation of cheese.

THE INFLUENCE OF BODILY LABOR UPON THE DISCHARGE OF NITROGEN.—Prof. J. S. Burdon-Sanderson has communicated to the Royal Society of London (Proceedings) the results of the experiments of W. North on this subject. He took for his aids the researches of Dr. Parkes, and of Dr. Austin Flint, Jr. Flint's methods of research he considers as insufficient. Parkes' researches leave undecided the question of whether the increase in the discharge of nitrogen as the immediate effects of bodily labor occurs at the expense of stored material independently of any concomitant or subsequent increase of intake. This was the question which was the object of his experiments.

He reduced all his food-stuffs to fluids or powders, these being the only accurate way of sampling and analyzing them. Thus he took: Meat (dried and ground to powder); flour; vegetables (dried); potato (Edwards' patent dessicated); condensed milk. He regulated his diet for some four or five days before beginning an experiment, and took rather more exercise than usual in order to get rid of any possible surplus in the body. The first day of the experiment he abstained from food, and then placed himself upon a regulated diet of accurately known composition for nine or ten days, and about the middle of the period performed a certain amount of muscular labor. This labor consisted in walking a known distance and carrying a load whose weight was accurately determined (about 27 pounds). He gives several tables to illustrate the result of his experiments, and reaches the following conclusions:

The results, while they confirm those of Dr. Parkes, show that the disturbance produced by severe labor is much more immediate and of much greater intensity than that which Dr. Parkes observed. With Dr. Parkes they show that "an insufficient supply at one time must be subsequently compensated" whether the insufficiency be due to privation of food or to exercise. This storage of nitrogen is the expression of a tendency of the organism to economise its resources, which is much more constantly operative than has hitherto been supposed. As regards the phosphates and sulphates, unless the exertion be very severe the phosphates are not increased, whilst the output of sulphates is distinctly increased in every case, the increase being in general terms proportional to that of nitrogenous material. The total sulphur of the food was not estimated, but it is known that the percentage of sulphates contained in the food was insignificant as compared with that excreted in the urine, and consequently almost all the discharge must have been a product of oxidation.

THE "CRANE-AGRAFE."—Mr. J. D. McCan, of Portlenone, Belfast, Ireland, has invented an instrument, which is illustrated in the *Midland Medical Miscellany*, for holding the skull while sawing off the calvaria. It consists of a firm handle screwed into the base of two flexible arms which, at their extremities, are provided with two semicircular metal bands. These bands encircle the skull on either side, are made to press firmly by the screw of the handle acting upon the hinges of the arms, and are fastened in place by the joints which are attached to them. When not in use it can be folded up so as to occupy very little space in a case of post-mortem instruments.

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THE EDITOR of this JOURNAL would be glad to receive any items of general interest in regard to local events, or matters that it is desirable to call to the attention of the profession. Letters written for publication or containing items of information, should be accompanied by the writer's full name and address, although not necessarily to be published. All communications in regard to editorial work should be addressed to the Editor

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THE OBLIGATION OF MEMBERS OF THE AMERICAN MEDICAL ASSOCIATION TO SUBSCRIBE TO OR SIGN THE CONSTITUTION, BY-LAWS AND CODE OF ETHICS, AS A CONDITION OF REGISTRATION.—In a previous number of this journal we referred to this subject, more particularly for the purpose of explaining how and why the Registration Committee at the meeting in Cleveland last year placed in the blank card which every member was required to fill up and sign, a clause signifying that the signer "had adopted the Constitution, By-Laws and Code of Ethics" of the Association.

We fully explained in the former article that this method was adopted as a substitute for the literal signing of these fundamental regulations or laws in a large book, as was done in the earlier history of the Association.[1] But as a correspondent in Buffalo seems to be still troubled in his mind about the rights of several thousand members of the profession in his State, and still more, as the action of the Registration Committee in Cleveland has been grossly misrepresented, and the Association itself denounced in unmeasured terms on account of that action, we propose to examine the subject sufficiently in detail to enable every reader to judge for himself. In doing so, we think it will appear obvious to every candid reader that the Association, through its registration officers, has neither required its members to take an "iron-clad oath," nor to sign "a pledge to support a code of exclusion," nor even "rudely shut its door in the faces of members who were entitled to enter," but on the contrary, has simply resumed the performance of a constitutional duty which should never have been neglected. Perhaps there is no one custom more universal connected with the formation and support of society organizations of every kind, than that of requiring those who become members to signify their approval of the organization and objects of such society by signing its constitution and by-laws.

Indeed, so general is this custom that the mere *acceptance* of membership in a society is regarded as presumptive evidence of approval of its constitution and regulations. For a society without a definite plan of organization or written constitution and by-laws to define its objects and regulate its transaction of business, would be merely an unorganized meeting of independent individuals. And a society having a constitution that should admit an indefinite number of new members, from year to year, without any regard to their approval or disapproval of that constitution, would soon be practically in the same condition as though no constitution existed. The resolution by virtue of which the American Medical Association was formed at the adjourned meeting of the first National Medical Convention, in 1847, is as follows:

"Be it *Resolved*, In behalf of the medical profession of the United States, that the members of the Medical Convention held in Philadelphia in May, 1847, and all others who, in pursuit of the objects above mentioned, are to unite with or succeed them, constitute a National Medical Association; and that, for the organization and management of the same, they adopt the following *Regulations:*" Then follows, first, the title or name of the Association; second, the provision for members, of which three classes are made, namely: Delegates to be elected by State and local medical societies and by various other medical institutions; members by invitation, to be elected by the Association; and Permanent members, to consist of those who had once served as delegates. The latter were allowed to "continue such so long as they remain in good standing in the body from which they were sent as delegates, and comply with the *requirements* of the By-laws of the Association."

Then follows, as the closing paragraph of that section of the constitution relating to members, the following provision:

"Every member elect" (not every delegate elect, nor every member by invitation elect) "prior to the permanent organization of the annual meeting, or before voting on any question, after the meeting has

[1] See Vol. 2, No 3, page 70.

been organized, must exhibit his credentials to the proper committee, and *sign these regulations*, inscribing his name and address in full, specifying in what capacity he attends, and if a delegate, the title of the institution from which he had received his appointment."

This plain provision of the constitution has existed from the first organization of the Association in 1847 to the present time without alteration or amendment. And in direct compliance with its provisions, the Permanent Secretary and Registration Committee, at the meeting in Cleveland last year, had the following blank card or slip prepared for members applying for registration to fill and sign:

"American Medical Association,

"CLEVELAND, OHIO, JUNE, 1883.

"In acknowledgment of having adopted the Constitution, By-laws and Code of Ethics of this body, and of my willingness to abide by them, and use my endeavors to carry into effect the objects of this Association, I hereunto affix my name.—Extract, vol. xxxiii, p. 623.

"Name (in full) .....
"Post-office .....
"County .....
"State .....
"Delegate from (name of society)....
"If not a delegate, state in what capacity you attend ....."

It will be seen that the much talked of "pledge" or "iron-clad oath," is the simplest form of acknowledgment of the adoption of, and obedience to, the organic laws of the Association, and a promise to aid in carrying into effect the *objects* of the Association. And lest there might be a suspicion of something covered under the word "objects" as here used, we will quote them as set forth in the preamble to the constitution itself.

Said preamble declares as follows:

"Inasmuch as an institution so conducted as to give frequent, united, and emphatic expression to the views and aims of the medical profession in this country must, at all times, have a beneficial influence, and supply more efficient means than have hitherto been available here for cultivating and advancing medical knowledge; for elevating the standard of medical education; for promoting the usefulness, honor, and interests of the medical profession; for enlightening and directing public opinion in regard to the duties, responsibilities and requirements of medical men; for exciting and encouraging emulation and concert of action in the profession, and for facilitating and fostering friendly intercourse between those who are engaged in it, therefore." Surely no right-minded member of the profession need hesitate about promising his aid to carry into effect such objects as these.

The only possible ground for objection to the card provided by the Registration Committee, as quoted above, is its including the Code of Ethics as a part of the "regulations" mentioned in the constitution.

Both the original Constitution and By-laws, and the Code of Ethics were reported by separate committees to the adjourned meeting of the National Convention in Philadelphia, May, 1847, and both were adopted by that convention on the same day, as preliminary steps to the final resolving of the convention into the Association under the constitution and Code of Ethics thus adopted. It is true that the constitution as then reported and designated "these regulations," contained no direct allusion to the Code of Ethics. But only eight years thereafter, namely, at the meeting of the Association in Philadelphia in 1855, attention was called to the fact that the Ohio State Medical Society had taken some action contrary to that provision of the Code which forbids the holding of patents for surgical instruments, etc., and it led to the prompt adoption of the three following resolutions at that meeting:

"*Resolved*, That no State or local society shall hereafter be entitled to representation in this Association, that has not adopted its Code of Ethics.

"*Resolved*, That no State or local society that has intentionally violated or disregarded any article or clause in the Code of Ethics shall any longer be entitled to representation in this body.

"*Resolved*, That no organization or institution, entitled to representation in this Association, shall be considered in good standing, which has not adopted its Code of Ethics." [See Transactions, Vol. viii, pp. 56 and 60.]

Two years later, the Committee of Publication was directed to have these and other resolutions that had been adopted as by-laws, appended to the constitution and published in each volume of Transactions of the Association. And at the same meeting, the committee was also directed to "append the Code of Ethics of the American Medical Association to each volume of the present and future annual Transactions." [See Vol. x, p. 603.]

In 1874, when the Constitution was so altered as to restrict the appointment of delegates to State and local medical societies and to the medical staffs of the Army and Navy, the three resolutions quoted above were consolidated into the form of the ninth

by-law as now published in the Transactions, and at the same time (1874) the section of the Constitution in relation to the appointment of delegates was so altered as to make the adoption of the Code of Ethics an element in determining the number of delegates that could be sent from any given locality. Again, at the meeting of the Association in Buffalo in 1878, when an amendment to the Code of Ethics was proposed in due form, it was promptly decided by the President, Dr. T. G. Richardson of New Orleans, that the Code of Ethics was a part of the fundamental law of the organization, and that the proposed amendment must lie on the table one year for the consideration of members, and come up in order at the next annual meeting in the same manner as provided for amendments to the Constitution. No one took exceptions to this ruling. It is very plain, therefore, from the foregoing historical facts, that the Code of Ethics was framed and adopted originally as a part of the organic law of the Association; that part, indeed, which was especially designed to constitute a basis of union and harmonious action for the profession of the whole country; that its adoption by State and local medical societies and institutions was made necessary by positive by-law regulations during the first ten years of the history of the Association; and that from the early period named to the present time, now thirty years, it has been recognized and amended as a part of the organic law, and with the Constitution, appended to every annual volume of Transactions of the Association. Indeed, the Code has been so recognized, both in the Constitution relating to the election and appointment of delegates, and in the by-law relating to the eligibility of societies, that signing the Constitution and by-laws necessarily carries with it approval of the Code of Ethics on the part of the signer. Consequently, if the registration committee in Cleveland had omitted naming the Code of Ethics with the Constitution in the blank form provided for members to fill and sign, and thereby had led any to suppose that in signing they were not endorsing the Code of Ethics, it would have been a deception.

And we trust the Registration Committee and Permanent Secretary will present the same full and proper acknowledgment for every member to sign who presents himself for admission to the coming meeting in Washington, only substituting the word *see* for that of "extract," where reference is made to the clause of the Constitution requiring such acknowledgment on the part of members.

If there are any members who desire alterations in the Code or the Constitution, let them propose their amendments in due form under the perfectly fair provisions made for their reception, consideration, and final adoption or rejection, in open session of the assembled representatives of the profession in all parts of the country. But let the Association maintain its own self-respect, and the respect of the profession in all the States, and preserve the unity of our medical society organizations, by firmly refusing admittance to its annual meetings of all such persons as are unwilling to acknowledge obedience to its Constitution, By-laws and Code of Ethics.

American Medical Association and Railroads.—We are authorized by the Chairman of the Committee of Arrangements, at Washington, to state that arrangements are being made with all railroads reaching Washington from every section of the country, looking to a reduction of fare for delegates to the Association, which meets in that city on the first Tuesday in May next. Those who desire further information upon this subject can apply to Dr. D. W. Prentiss, of Washington, D. C.

Notice to Exhibitors.—As requested, we repeat the following notice: Manufacturing chemists, pharmacists, instrument makers, etc., who wish space provided for their exhibition during the meeting of the American Medical Association, beginning May 6, should make application to Dr. D. C. Patterson, 919 I street, Washington, D. C., before April 1, 1884.

Sanitary Council of the Mississippi Valley.—The sixth annual meeting of this organization was held in Memphis on the 21st inst. Thirty members were present, representing eight States, extending from Minnesota to Louisiana. The officers elected for the ensuing year were as follows: For President, Hon. D. P. Hadden, of Memphis; Vice-President, Dr. J. A. Dibbrell, of Arkansas; Secretary, Dr. J. H. Rauch, of Springfield, Illinois. A more full account of the proceedings will be found under the head of State Medicine in the next issue of the Journal.

Picric Acid as a Test for Albumen.—Drs. Cooke and Watkins, at Bay View Asylum, Baltimore, found that in malarial cases in which quinine and cinchonidine were being given in large doses, these alkaloids were excreted in the urine and gas, with picric acid, a reaction simulating albumen. Solutions of the alkaloids were found to give similar precipitates.—*The American Practitioner.*

SOCIETY PROCEEDINGS.

SUFFOLK DISTRICT MEDICAL SOCIETY.

SECTION FOR CLINICAL MEDICINE, PATHOLOGY, AND HYGIENE. ALBERT N. BLODGETT, M.D., SECRETARY.

February 13, 1884. Meeting called to order at 8 o'clock, Dr. R. T. Edes, Chairman, presiding. The records of the last meeting were given in summary, and approved.

The paper of the evening was then presented by Dr. S. W. Abbott, Health Officer, Massachusetts State Board of Health, Lunacy and Charity, on Modern Legislation in Regard to the Adulteration of Drugs.

Dr. B. F. Davenport, State Analyst, then described the means employed in the detection of impurities in various medicinal substances as follows:—

As analyst under the Adulteration Act I have, as the result of my first year's work, reported to the State Board upon 680 samples of of about 100 different kinds of pharmacopœial drugs, of which I found 284, or 41.76 per cent., to be adulterated within the meaning of that act. This defines as an adulteration in drugs, including all medicines for internal or external use, antiseptics, disinfectants, and cosmetics (1) if when sold under or by a name recognized in the United States Pharmacopœia, it differs from the standard of strength, quality, or purity laid down therein; (2) if when sold under or by a name not recognized in the United States Pharmacopœia, but which is found in some other pharmacopœia or other standard work on materia medica, it differs materially from the standards of strength, quality, or purity laid down in such work; (3) if its strength or purity falls below the professed standard under which it is sold.

Those drugs have principally been selected for examination which were of the greatest importance as medicines, and which were known to be especially liable to vary from the standard quality, the profit of debasement being great, and detection thereof difficult from requiring special technical knowledge.

Of chiefest importance, therefore, are opium and cinchona bark with the many preparations made therefrom.

Of the forty-six samples of powdered opiums examined hardly one of the not evidently reduced samples fell below the twelve per cent. of morphine, the minimum limit of variability allowed by the United States Pharmacopœia, 1880, and but one exceeded the maximum limit of sixteen per cent. Thus the limits of the United States Pharmacopœia seem to cover all fair samples likely to be found in our market, of which the average morphine content is about fourteen per cent. The 1880 Revision of the United States Pharmacopœia seems, upon a superficial view, to have raised the minimum limit of morphine strength of powdered opium two per cent., but it is not really so. The minimum limit of twelve per cent. required by the Revision of 1880 is by an excellent process of assay, in which all the requirements are given in full detail, while the minimum of ten per cent. required by the Revision of 1870 is by a totally different process, in which many of the details needed for obtaining any definite results are totally omitted. For instance, the concluding sentence of the method is, in speaking of the crude crystals which have been obtained, "To purify these boil them with two pints of alcohol until they are dissolved, filter the solution while hot through animal charcoal, and set aside to crystallize." Now according to my own experience, in working upon an average opium, this amount of alcohol of that strength will not dissolve all the morphine crystals obtained, but it requires about half as much more alcohol. Then the amount of the animal charcoal to be used is not mentioned, a very material point considering that it absorbs quite a per cent. of the morphine, which cannot be afterwards all recovered from it even by repeated additions of boiling alcohol, yet the 1870 United States Pharmacopœia does not provide for the addition of the alcohol even once. Then there is no limit given of the time to set it aside to crystallize, another very important defect, considering that the given amount of alcohol would hold in solution, even when cold, about one-quarter of all the morphine obtained from a ten per cent. powder. All this would be lost to the assay unless the alcohol be set aside long enough to deposit it by evaporation. It can thus be very readily seen that the process of assay by which the United States Pharmacopœia, 1870, required a powdered opium to yield at the least ten per cent. of morphine, might be honestly conducted so as to require a considerably higher morphine per cent. than the United States Pharmacopœia, 1880, requires for its twelve per cent. by a very definite method. Conducted, however, even to the best advantage for the sample of opium, I think that the two standards will be found to be just about the same. In other words, that although the revision of 1880 seems to have raised the minimum standard for powdered opium two per cent., it has not really raised it at all.

Now in regard to tincture of opium there prevails much unfounded apprehension on account of the great supposed increase in its strength. This, according to the last edition of the United States Dispensatory, is not sustained by the real facts. It is founded, I believe, principally upon the assertion of Dr. E. R. Squibb that he shall, since the last revision of the United States Pharmacopœia, put now six grains of morphine in one fluid ounce of his laudanum instead of only four grains as formerly, thus making an increase of 50 per cent. in *his* morphine strength, according to the Dispensatory, "allowing the opium to be wholly exhausted of its active principles, one grain would be represented by very nearly eleven minims, according to the United States formula of 1880, while in the United States Pharmacopœia, 1870, one grain was represented by 12.8 minims." This represents an increased strength of only 14 per cent. of morphine between the tincture opii, United States Pharmacopœia, 1870 and 1880, that is, the grain dose is given in about twenty-two drops instead of twenty-five as formerly. This dif-

ference of three drops only is a less variation in quantity than would probably by made by successive attempts of the same or different persons to drop out the old twenty-five drop dose. So that I think physicians need not under *ordinary* circumstances have any anxiety as to whether it will be a tincture made according to the United States Pharmacopœia, 1880 or 1870, that will be dispensed in their prescriptions. Yet it would be well, for a while at least, to write (U. S. P., 1880) after the name of any pharmacopœial preparation which physicians particularly desire to be *surely* of the full strength, as what would thus be likely to be dispensed would more probably be of the proper quality, and the writing thus would show the pharmacist that the physician was observant and particular in such details. This is a much more reasonable way than writing the name of any particular manufacturer after pharmacopœial preparations, for it allows the pharmacist to put up his own or any one's make that he is ready to guarantee, but holds him to the full responsibility of that which he dispenses. He could not, however, be thus held if he put up a particular make which was ordered, even if this was not more than a quarter of the full proper strength.

In my examination of 100 samples of laudanum collected from all over this State, the pharmacopœial limits being between 1.2 and 1.6 per cent. of morphine, I have found samples containing all the way from 0.33 to 1.87 per cent. of morphine, thus one six times as strong as another, and with specific gravity varying from 0.921 to 0.997. Four samples exceeded the 1.6 per cent., and eighty-two fell below the 1.2 per cent. The average per cent. was 0.965, and the specific gravity 0.953. Forty-five samples contained about 1 per cent. of morphine, as was required by the United States Pharmacopœia, 1870, if assayed by the modern process of United States Pharmacopœia, 1880. The best pharmacists of this city are now generally making up their tincture to the average United States Pharmacopœia standard of 1.4 per cent. morphine, or about the six grains to the fluid ounce. The ten samples of morphine salts examined have all come up to standard.

Of citrate of iron and quinine forty samples were examined, and were found to contain all the way from 3 per cent. to 14.37 per cent. of quinine, the present United States Pharmacopœia requiring 12 per cent. only, while the previous one required 16 per cent. Of these samples 82.5 per cent. fell below the present standard, two makers alone having been found to have their preparation generally fully up to standard. Of about thirty samples of quinine salts examined, 28.5 per cent. contained an excessive amount of the cheaper cinchona alkaloids.

Only two out of a dozen samples of powdered jalap contained the proper amount of resins; while out of ten samples each of the bromide and iodide of potassium not one came up to standard. Trade absurdly demanding that the crystals should be, not translucent and colorless, and therefore *possibly* pure, but opaque and porcelain white, and therefore *of necessity* impure, with excess of alkali, which renders them unfit for use with alkaloids, syr. ferri iod., or any other like combination which might be desired.

Dr. Edes remarked that by employing the more recent manufactures by Squibb the physician would obtain a much larger dose than in the earlier preparations. In the case of tincture of opium, the present preparation contains 50 per cent. more opium than the former tincture.

Dr. George B. Shattuck asked what were the poorest results obtained by analysis of laudanum and citrate of iron and quinine.

Dr. Davenport stated that the most common result was to find a content amounting to from one-fourth to three-fourths the amount required by the Phamacopœia in analysis of tincture of opium, and in citrate of iron and quinine any amount from one-third to the normal quantity.

Dr. Morton Prince suggested that if the firms who manufacture and dispense standard goods were made known to the profession, it might be the means of protection from imposition on the one hand, and aid in driving the spurious articles out of the market on the other hand, both of which objects it would seem desirable to accomplish.

Dr. C. Harrington, of the Harvard Chemical Laboratory, gave a somewhat detailed account of the analyses of various articles of food under the auspices of the Board of Health as follows:—

About 300 samples of milk have been subjected to analysis. The milk was obtained from all parts of the State, and was secured in each instance from the regular supply furnished to customers. Milk should contain under normal conditions about 13 per cent. solids. In some specimens the solids were present only to the extent of 9 per cent. The first 100 samples of milk and the greater part of the second and third hundreds were obtained in Boston, and of these samples more than 70 per cent. were adulterated. The milk from the western parts of the State, particularly from Berkshire County, was found to be nniformly freer from adulteration than that from the eastern counties. The poorest samples of milk were invariably those obtained from the shops and groceries in which it is sold at retail. Milk directly from the cart was always of better quality. In certain large towns the milk supply was far superior to that in certain other towns of equal population. Thus, Lawrence, Worcester, and Springfield enjoy purer milk than do Lynn, Chelsea, and Somerville. In Worcester the solid constituents of milk averaged from 12 to 16 per cent., while in ten cases which were prosecuted the proportion of solids was in none more than 9 per cent.

Various articles of food were found to be adulterated in 50 per cent. of the samples. Butter was occasionally found adulterated with oleomargarine. Tea was adulterated to a greater or less extent, one sample containing 26 per cent. of sand. One specimen of coffee was found to contain 20 per cent. of chiccory. Two hundred samples of spices were examined, and all were found to be bad. Of 24 samples of mustard, only two were found to be good. Fifteen different brands of mustard in boxes were found to consist of wheat, flour and tumeric in a greater or less degree. Various samples of pepper

were analyzed, and found to contain chiefly only dirt. Spice mixture is found to consist mainly of similar material, and sells for 40 cents per pound. Several specimens of pure olive oil from Leghorn were analyzed, and were found, without exception, to consist entirely of cotton-seed oil from the Providence Oil Company.

In cereals and bread no adulterations were detected. Bread contained neither alum or copper. Some specimens contained an excess of moisture, but this can hardly be called an adulteration. Cocoa and meals, sago and tapioca were not found to be adulterated.

Dr. J. C. White asked the minimum standard of milk solids in cases which were prosecuted.

Dr. Harrington stated that no case had been prosecuted in which there was a solid content of 11½ per cent.

Dr. White alluded to a case in which no adulteration could have possibly taken place, in which the amount of solids reached only nine per cent.

In reply to a question, Dr. Harrington stated that none of the milk examined was rendered in any way injurious by adulteration, that nothing but the cream had been removed, and nothing but water had been added to it. Neither of these changes would make the milk injurious or dangerous.

Mr. G. F. Piper, Attorney to the State Board of Health, who was present by invitation, spoke as follows:

Prior to the passage of the statute of 1882, entitled "An Act relating to the Adulteration of Food and Drugs," the legislation upon that subject was confined to fraudulent adulterations and adulterations injurious to health. The fraudulent conduct, or the guilty knowledge, or the fact that the adulteration was injurious to health, therefore became elements, upon a complaint, which the government was bound to prove, and the great difficulty of proving these elements virtually made the statutes upon that subject a nullity. Very few prosecutions accordingly resulted. This form of legislation was not broad and stringent enough to reach the many cases of substitution of one article for another, or, as in the case of a drug, its manufacture below the ordinary standard of strength and purity usually adopted and recognized, or a case where some valuable constituent may have been removed and a poorer one substituted, and the many other various forms of commercial frauds existing. The statute of 1882 broadened and extended this class of legislation, its purpose being to reach all cases which the previous legislation did not reach.

In the case of drugs it adopts a standard, and makes it an offense if the party selling sells an article varying from that standard if sold under a name which carries with it a recognized standard. If the drug sold is one recognized in the United States Pharmacopœia, it adopts that standard. For instance, tincture of opium, according to the Pharmacopœia of 1880, contains 1.20 percentage of morphine. A druggist, therefore, who sells tincture of opium of less morphine strength than that standard is liable to prosecution.

If the drug is sold under a name not recognized in the United States Pharmacopœia, but which is found in some other Pharmacopœia or other standard work on materia medica, it would be an offense under the statute if it differed materially from the standard of strength, quality or purity laid down in such work. And again, it would be a violation of the statute if the strength or purity of the drug fell below the professed standard under which it was sold.

In the case of food, the statute defines also what shall be deemed an adulteration; for instance, mixing any substance or substances with the article so as to reduce, lower, or injuriously affect its quality or strength; substituting any inferior or cheaper substances; abstracting any valuable constituent, or selling an article under the name of another article.

The statute absolutely prohibits the sale of any article of food or any drug adulterated within the meaning of the act.

The element of fraudulent conduct, or guilty knowledge, or criminal intent, does not enter into the offense. If the party selling violates any of the provisions of the statute he is liable to the penalty therein set forth, without regard to the question whether he knew or did not know what the article was he sold, For the protection of the public, the statute imposes upon the tradesman the most extreme caution in selling his goods. He is bound to know what he is selling. This, certainly, is no injustice, for the purchaser buying and paying for a pure article is entitled under the law to the greatest protection.

The tradesman by the exercise of proper caution can inform himself of the nature of the article sold, while the purchaser must rely, and does rely, wholly upon the good faith of the tradesman. There is every reason, then, why the burden should be placed upon the seller and not upon the purchaser.

The statute imposes the duty of enforcing the provisions of the statute upon the State Board of Health, Lunacy, and Charity. The enforcement of similar laws, for example, the laws against the adulteration of milk, and the laws against the adulteration of vinegar, have heretofore been left with local inspectors, appointed by the different towns and cities throughout the Commonwealth. This mode of enforcing a law has proved generally to be an utter failure.

The local inspector is usually some individual who has been appointed for some political service rendered, who may have no qualifications for the office, and whose only purpose and desire often are to make the greatest money's worth out of his office. The salary is usually very meager, and no appropriation is generally made for the expense of enforcing the law. Accordingly little work is usually done and the adulterator flourishes.

The milk inspector of Boston recently testified before the Legislative Committee on Public Health that he had made six hundred examinations of milk during the past year, and thirteen persons had been convicted of selling adulterated milk. His practice was, he said, to go around the city early in the morning, carrying with him his lactometer and placing it in the milk; he in that way decided whether the milk was

adulterated. It is well known that this method of determining whether milk is adulterated is very unreliable and unsatisfactory. This may to some extent account for the few prosecutions and the condition of the milk market in Boston, in which, according to the statement of Dr. Charles Harrington, chemist to the State Board of Health, ninety per cent. of the milk sold during the past year was adulterated, and badly adulterated.

The State Board of Health, Lunacy, and Charity, by reason of the qualificaiions of its members and its freedom from local and political influences, is more likely to be a much more efficient agency to be intrusted with this work.

In November last the State Board commenced its prosecutions. The first prosecutions were against grocers and provision dealers in Boston for selling adulterated milk, and these were subsequently followed up by others.

Ten convictions have been secured.

Complaints were entered during the same time against several parties for selling adulterated tincture of opium, and in one case for seliing adulterated citrate of iron and quinine.

The analysis of the tincture of opium sold showed the following percentages of morphine: .38, .63, .79, .72, .81, where the Pharmacopœia standard of 1880 required 1.20. They were all convicted, with one exception, and in that case the adulteration was clearly proved, but the firm prosecuted testified that the tincture was sold by a young man in their employ who had no authority to sell, his duties being not those of a salesman, but pertaining to another department. This firm escaped conviction in that way.

The first prosecution for selling adulterated tincture of opium was before the Central Municipal Court of Boston, and developed the question which Pharmacopœia was the standard by which these cases should be governed, whether that of 1870 or that of 1880.

The Pharmacopœia of 1880 was not published and in use in August, 1882, when the Food and Drug Act took effect. It was accordingly contended by the parties prosecuted that the legislature must have had in view the standard of 1870, and that these cases should by tried and judged by that standard. On this first prosecution the tincture of opium was, in its morphine strength, below both the standard of 1870 and 1880, and the judge who tried the case found as a fact that the drug was adulterated, but did not rule upon the question which standard was in force. On the next prosecution before the chief justice of that court the question was again raised and presented, and a decisive ruling was made to the effect that the Pharmacopœia standard by which the drugs sold should be judged was that which was in use at the time when the sale was made, and accordingly ruled that the standard of 1880 must govern existing cases. This ruling has been followed by the other judges of that court.

On the prosecution for selling adulterated citrate of iron and quinine, it appeared that the article sold varied from the standard percentage of the quinine according to the formula of the Pharmacopœia of 1880. The parties were convicted.

A prosecution was made against a dealer in vinegar in Somerville, for selling a vinegar as a pure cider vinegar. The statute makes it an offense to sell as cider vinegar a vinegar that is not the legitimate product of pure apple juice, known as apple cider.

The chemist for the government testified that in his opinion, the sample sold was a cider vinegar which had been watered. The chemist who was summoned by the defendant before the trial had been given full opportunity to test the sample. Upon the witness stand he testified that he had had a large experience in the manufacture and analysis of cider and cider vinegar, but he had in his experience never seen a cider vinegar with the small amount of acetic acid and residue which this sample contained. He further testified that the sample was to him very suspicious.

The judge, contrary to all precedents, ruled that it did not appear that any criminal intent existed, or any fraudulent conduct. The counsel for the government suggested that it was not necessary for the prosecution to prove either elements; that the sale itself, under the statute, was a violation of law, and that no criminal intent, or guilty knowledge, or fraudulent conduct need be shown. He replied that that would be unconstitutional.

The defendant was discharged.

This principle has been decided time and again by our Supreme Court, and the ruling of the Somerville court in that respect was clearly and beyond question wrong.

I have been very much surprised at the position taken by the press of Boston in reference to these prosecutions. The reporters of three of our newspapers have told me that they have received orders not to report facts in reference to these prosecutions, and that articles that have been written by them for publication have been refused publication. I had supposed that in a matter of this kind that it was the duty of the press to advocate what seems to me to be the cause of the people. The purity of food and the purity of drugs should and must be a matter of great moment and importance. The reason of this course pursued by the press of Boston we may not know, but I think we can, each one of us, very clearly draw our inferences what that cause may be.

The physician is largely interested in the enforcement of this law. When he writes his prescription, it is of the greatest moment to him, as well as to his patient, that it shall be filled out as he has written it, and according to the existing standard. A fixed standard is absolutely necessary, and the physician and the druggist must in unison adopt that standard.

At the recent hearing before the Legislative Committee on Public Health, it was testified by one who had been a defendant in one of the prosecutions for selling adulterated tincture of opium, that he did not believe in the Pharmacopœia, and he would leave it to the discretion of each druggist to fill out a prescription. Comment upon such a statement is unnecessary. Let, then, the physicians of Boston give their strong moral support and encouragement to the

State Board of Health, Lunacy, and Charity, in the enforcement of this law, and make it an efficient law, and not a dead letter.

Mr. S. M. Colcord, PH.G., a former President of the American Pharmaceutical Association, was called upon by the Chairman and responded as follows:—

I was not expecting to be called upon to speak. I am not now in the drug business, consequently not an adulterator; not personally interested in the law, but am in the milk business, making pure milk. I am interested in this question as a matter of public welfare, and consider it a question of vital importance. More than 30 years ago I served on committees to detect, expose, and prevent adulteration. The American Pharmaceutical Association had its birth in a convention of the best apothecaries in the United States, called for the purpose of exposing and preventing the importation of inferior, adulterated, or spurious drugs. A law was already upon the statute book, and this convention was called to state the facts to the government, and pray for the enforcement of the act for the public welfare. The convention found it to be a work of time, and that home adulterations were equally important, and that patent medicines seemed to be exerting a controlling influence. And after two annual conventions a constitution and code of ethics were formed, and the convention adjourned to meet in the city of Boston as the American Pharmaceutical Association, with a Boston man for president, and here in the city of Boston we fought the great battle of adulteration. On the question of "admitting all drugs good of their kind," it was decided, mainly by Boston votes, that the large class of spurious, adulterated, and sophisticated goods was to be admitted no longer through our custom houses. The consequence was that the distributing ports of the world soon found out that the United States was no longer to be the market for their worthless trash. Orders went out for goods of quality that would pass the custom houses, and it soon came about that foreign consignors sent no more poor goods to this country, and our dispensers became acquainted with a class of drugs heretofore unknown in our country, and now every one is satisfied with the law; no one is oppressed; dispensers, *well informed*, have no trouble in finding pure articles of fine quality, and everything is lovely in that direction. But how about patent medicines and home adulterations? Well, the new Association found itself born of "poor but honest parents," and not having arrived at a fighting age, voted that patent medicines or secret remedies were not a legitimate part of the dispenser's business, and as this was too big for them to handle, and as they had so much other useful work to perform, that they would have nothing to do with this question. Home adulterations continued to be reported year after year, the Association growing more critical and severe (without accomplishing anything) until the committees making the reports were threatened with private prosecution. It was then voted to change the committee so as to serve the drug market, and the Association has since done what it could by fostering investigation, science, and education, as a preventive and controlling influence upon home adulteration.

As I am now out of the business, I do not fell like talking upon this subject. The fact is these people are all my friends,—the wholesale druggists, the retailers and dispensers, the prescribers, and the patients who have patience to take these adulterations, and my experience has been that I cannot shoot an unknown enemy at long range without finding it a fratricidal onslaught with poniard and pop-gun.

This matter of home adulteration is not a thing that has grown up in the drug business. You might as well say the drug business grew out of adulteration. I presume in the beginning they started in the race together, but I think now that adulteration may be a little ahead. It has always seemed to me that many honest and honorable men in the drug business have come to think that what many people call adulteration, sophistication, and substitution, is an unavoidable and legitimate part of the business, and that having adopted the business, they adopt these side issues as annexes to the law and the *profits*.

Now, this law was not put upon the statute-book by any action of the drug trade, neither was any remonstrance made to it that I am aware of, and the drug trade has had very little interference from the law, and it only desires to be let alone, and to do as it pleases, and feels abundantly able to settle points of quality with its customers without the interference of law But still the fact remains that the United States Pharmacopœia is nearly a perfect standard of quality, fully recognized as a legal standard, with nothing ambiguous or undefined, and very easily conformed to by all persons qualified (even very poorly) to do an ordinary drug business; that by enforcing this law all are freed from disloyal and dishonorable competition in quality, and can have no reasonable objections to the law.

If we try this law fully enforced for awhile, we shall find relief from all conflictions between honesty, conscience and profit; we should have the confidence of our customers, and all parties would be benefited commercially, and the mercenary taint that clings so tenaciously to the drug business will be so far removed that few, if any, would be willing to have the law repealed or become a dead letter.

Henry Canning, PH.G., President of the Massachusetts College of Pharmacy, spoke as follows:

Experience has shown that the President of the College of Pharmacy cannot be too careful in acting as its mouthpiece, for the reason that the institution was apt to be held responsible for all sorts of legislation touching the pharmacist.

As an individnal, however, I trust that if any modification of this law must be made, it may be only in the direction of making it stronger. It is eminently a law for the better protection of suffering humanity.

I was somewhat chagrined on hearing the report of the various adulterations in the line of food and drugs, to find that so large a percentage of the pharmaceutical products examined had been found wanting, but the feeling was a little softened when I learned that

the same report showed a much larger percentage of adulteration in important articles of food.

Again, I trust that if any change in this law be made, it be only in the upward scale.

Prof. G. F. H. Markoe spoke in favor of the present law as follows:—

Mr. President,—I am heartily in favor of the law for the prevention of adulteration of food and drugs, and would be sorry to see it changed except in the direction of greater efficiency.

The remarks by the gentlemen who have spoken before me place the subject of adulteration of drugs in its worst aspect. More than twenty years of practical familiarity with the drug market enables me to affirm that during all that time there never has been, and there is not now, any serious difficulty in getting good drugs, pure chemicals, and well-made, full strength pharmaceutical preparations from all reputable wholesale druggists or manufacturing chemists, provided the pharmacist or physician is willing to pay a fair price for choice drugs and standard preparations. The sharp competion in the prices of goods, mainly introduced by unscrupulous dealers, who care nothing for quality, has a great deal to do with the adulterations and substitutions that are found in the drug trade, especially in the line of powdered drugs, which may be quite worthless, and yet appear equally as good as the powder made from a pure drug. A skillful drug miller can transform worm-eaten or rotten rhubarb into a nice-looking powder quite as handsome as that furnished by a prime article of Chinese rhubarb. Citrate of iron and quinine may contain two per cent. or twelve per cent. of quinine, and yet the two samples may appear to be alike; a careful assay will alone show the true character of the article. But although citrate of iron and quinine with less than the standard quantity of quinine is quite common in the market, and is bought by those who will not pay the price for the official article, yet I feel sure that a very large portion of all that is sold is of good quality; because the chemists who produce the largest part of all that is used in the country make an honest preparation, and also because the great bulk of all the dispensing business is in the hands of honest and capable pharmacists, who demand a guarantee of quality from those of whom they buy, and who know enough to reject that which is not fit for use.

The wholesale drug trade of the country, with but few exceptions, is in the hands of honest and honorable men, who would much rather deal only in the best grades of drugs, and only in the products of the most reputable and skillful manufacturing pharmacists and chemists. The efficient enforcement of the drug law will compel the few firms who wilfully force poor goods upon the market to mend their ways; and since there is little chance for underselling on goods of equal quality, the ruinous competition which compels an honest man dealing only in honest merchandise to meet the prices quoted by dishonest dealers for articles bearing the same name and label, but far below the standard of purity and quality, this sort of unfair and unjust competition will be kept well in check by the law in question, and I feel sure it will receive the hearty support of all well-meaning dealers.

A few words with regard to the pharmacist, as distinguished from the druggist or wholesale dealer in drugs. I hold it to be his duty to closely watch all his supplies, and to assure himself of their proper quality. The United States Pharmacopœia of 1880 contains concise and accurate descriptions of all officinal drugs and chemicals, together with statements of the adulterations and impurities to which they are liable; also giving good tests for purity, and practical methods for the recognition of sophistications. This part of the work is so well done, that no intelligent pharmacist has any excuse on the score of the lack of a sufficient guide and standard. Those who do not know enough to use this excellent standard, must either employ some one competent to interpret and employ it for them, or run the risk, under the law, of being ranked with those men who willfully transgress for the hope of greater gain.

W. W. Bartlett, PH.G., Vice-President of the College of Pharmacy, spoke as follows:

Mr. Chairman:—I am very much interested in this adulteration law, and have attended many of the trials and hearings that have grown out of it.

I am First Vice President of the Massachusetts College of Pharmacy, but come here in my individual capacity only. It is contrary to the policy of the college to take part in anything of a political nature, it being strictly an educational institution. I believe that the law should remain on the statute books just as it is. The changes now sought to be made in it are in the interests of those who have been detected in adulterating their goods, and aim to make the law totally inactive. The best druggists in Boston favor the law as it is, and many have been present at the public hearings, and have so expressed themselves openly.

The action of the Boston Druggists' Association in the matter of adulterations has not been clearly understood by all. By your leave I will read the following resolution, offered by myself, and unanimously adopted by that body November 27, 1883:

Resolved, That the Boston Druggists' Association heartily condemns the practice of adulterating drugs and medicines, and will give its earnest support to any fair and legitimate means for suppressing the obnoxious business.

Physicians will have no difficulty in obtaining drugs and pharmaceutical preparations that are fully up to the standard of the United States Pharmacopœia of 1880, if they demand them. I make a practice of assaying my opium before making tincture of opium, and have found in every case the opium fully up to the requirements of the United States Pharmacopœia, 1880, when procured from a reliable source. I have also examined a sample of citrate of iron and quinine for a wholesale druggist in this city, which was the product of the laboratory of a reliable manufacturing chemist, and found it fully up to the standard of the United States Pharmacopœia, 1880.

These facts show that it is quite an easy matter to get reliable drugs and pharmaceutical preparations. The greatest difficulty that the retail druggist has to contend with is unfair and dishonest competition. The dealers in fancy goods having taken from us a

part of our business, and established ruinous prices for the articles so taken, the public immediately based the prices of prescriptions and drugs on these prices, regardless of purity and quality, and many unscrupulous druggists have met these prices, and furnished correspondingly bad goods.

I think that physicians should discriminate in favor of those stores where only strictly pure and standard goods are dispensed.

I believe that much trouble comes from the millers. I had occasion not long since to have a white preparation ground, and I found a cubeb and some gum arabic in the tailings. On requesting the miller to allow me to visit his mill, he objected, and I found that he did his grinding under lock and key.

In conclusion, I would state that I think that the law as it is can be safely left in the hands of the Board of Health without working hardship or oppression to the honest pharmacist or wholesale druggist.

Dr. Davenport, in reply to a suggestion that drugs from some reputable manufacturer should be specified by the physician in prescribing medicines, stated that he considered it better to demand a good article and leave it to the discretion of the pharmacist to supply the drug from any manufacturer he might think proper, or from medicines manufactured by himself if he should choose to do so. In this way, the responsibility for the quality of the goods is taken from the prescriber and placed upon the dispenser, who is also stimulated to the selection or preparation of articles of standard quality and reliability.

Wm. C. Durkee, PH.G., spoke as follows:

I am especially glad to hear the last remarks of Dr. Davenport. The practice of specifying a particular manufacture of pharmacopœial preparations does not seem to me a good one, but one which, should the custom largely increase, will produce injury to both apothecary and doctor.

The apothecary having little occasion to practice by manufacturing, the knowledge which he may once have acquired, will become less inclined or able to apply the pharmacopœial tests for purity and quality to those few drugs or preparations which are not ordered by the name of some manufacturer or dealer. The responsibility of the apothecary ceases when he complies with the order of a physician who indicates the maker of the preparation he wishes dispensed, and the physician assumes all the responsibility for quality, as the manufacturer may reside in another State or country, and not be amenable to Massachusetts law. Whereas if medicines are ordered by the officinal name only, the pharmacist is wholly responsible for quality, and if able to properly assay the officinal preparations, he is competent to manufacture them, and is entitled to a portion of the profit which would otherwise often go to any irresponsible foreign manufacturer who creates a demand for his preparations by advertising or otherwise.

I am heartily in favor of the law as it now stands, and believe it will do much to elevate the practice of pharmacy. It will help to do away with the competition of those who buy poor drugs and sell preparations from them, cheaper than good preparations cost to manufacture. It will help us to furnish physicians with reliable remedies, thereby adding to the faith in and knowledge of medicine and increasing its usefulness.

The pharmacist should be held responsible for quality, but should be allowed to make or choose the maker of the medicines he dispenses.

Dr. George B. Shattuck called the attention of the society to the bill lately introduced in Congress by a Pennsylvania representative to provide for the preparation and publication of a new Pharmacopœia. The subject was an important one, and had a direct bearing upon the question then under discussion. The present Pharmacopœia had been prepared by the best experts in the country after careful consideration and consultation. As was shown by preceding remarks of some of the well known pharmacists, who had added the weight of their presence to the meeting, the better the changes made in the work were understood the more they were approved of. The book had already been adopted as the legal standard in four large States, and was also the standard adopted by the United States Treasury Department. As many other excellent reasons readily suggested themselves why a new Pharmacopœia was unnecessary and objectionable, and he could not think of one in its favor, the speaker begged to be allowed to offer and move the adoption of the following resolutions:

Resolved, That this society is strongly opposed to a bill introduced into the National House of Representatives January 8, last, by Mr. Randall, entitled A Bill to Prepare and Publish a National Pharmacopœia for the United States. The Society believes that the present revised Pharmacopœia is at least as good a work as is likely to be secured by the passage of this bill.

That all necessary legal authority which the present Pharmacopœia does not now possess can be easily given it.

That the complication which would necessarily arise from two Pharmacopœias is undesirable.

Dr. F. H. Williams seconding the motion, the resolutions were ananimously adopted.

Mr. G. F. H. Markoe, of the Massachusetts College of Pharmacy, spoke against the bill and in favor of the present Pharmacopœia upon much the same grounds as those already given.

Adjourned at 10:30.

FEMALE MEDICAL STUDENTS IN RUSSIA.—The studies of female medical students in Russia are not prosecuted under the most favorable conditions. A telegram states that all those now in St. Petersburg have been compelled to take up their residence in a large boarding establishment provided by the authorities, instead of being free, as heretofore, to live where they please. They are to be at home before 9 o'clock in the evening, under penalty of exclusion from the medical course. The dread of Nihilism permeated every rank and condition of life in Russia.—*Medical Press.*

STATE MEDICINE.

HEALTH IN MICHIGAN.

Reports to the State Board of Health, Lansing, by observers of diseases in different parts of the State, show the principal diseases which caused most sickness in Michigan, during the week ending March 1, 1884, as follows:

NUMEER OF OBSERVERS HEARD FROM, FORTY-TWO.		For preceding week
DISEASES ARRANGED IN ORDER OF GREATEST AREA OF PREVALENCE.	Per cent. of observers who reported the disease present.	Per cent. of observers who reported the disease present.
Neuralgia	79	83
Rheumatism	64	80
Bronchitis	62	78
Consumption, of lungs	62	65
Intermittent fever	60	78
Tonsillitis	60	65
Influenza	50	73
Pneumonia	36	55
Remittent fever	31	47
Scarlet fever	31	25
Inflammation of kidneys	31	38
Erysipelas	24	30
Diarrhœa	21	35
Whooping-cough	19	25
Diphtheria	17	15
Inflammation of bowels	17	8
Measles	14	13
Inflammation of brain	12	8
Cerebro-spinal meningitis	10	8
Typho-malarial fever	7	10
Membranous croup	7	13
Cholera morbus	7	8
Puerperal fever	7	13
Dysentery	5	8
Typhoid fever (enteric)	5	5

For the week ending March 1, 1884, the reports indicate that inflammation of the bowels increased, that influenza considerably decreased, and that pneumonia, intermittent fever, bronchitis, rheumatism, diarrhœa, remittent fever, and inflammation of the kidney decreased in area of prevalence.

At the State capital, the prevailing winds, during the week ending March 1, were west; and, compared with the preceding week, the temperature was lower, the relative humidity and the day and the night ozone more, and the absolute humidity less.

Compared with the average for the month of February in the six years 1877–1882, neuralgia was more prevalent, and pneumonia, diphtheria, bronchitis, remittent fever, typho-malarial fever, and rheumatism were less prevalent in February, 1884.

For the month of February, 1884, compared with the average of corresponding months for the six years, 1879–1884, the temperature was lower, the relative humidity was more, and the absolute humidity and the day and the night ozone less.

Including reports by regular observers and others, diphtheria was reported present during the week ending March 1 and since, at ten places, namely, Calumet, Cazenovia, Detroit, Dowagiac, East Saginaw, Grand Rapids, Kalamazoo, Monroe, Pontiac, Saginaw City. Scarlet fever at 22 places, Bridgewater, Dorr, Detroit, East Saginaw, Grand Rapids, Hersey, Mason, Maple Valley, Monroe, Mt. Pleasant, North Muskegon, Orleans, Pierson, Sherman, St. Joseph, St. Johns, St. Clair, Saginaw City, Union City, township of Union, Vicksburg, and Whitehall. Measles at seven places, Detroit, East Saginaw, Monroe, Orleans, Owosso, Plainwell. Saginaw City. Four cases of small-pox at Bath, Feb. 29.

HENRY B. BAKER,
Secretary.

Lansing, March 5, 1884.

Report of deaths in the city of Lansing, Mich., during the month of February, 1884:

Burial Permit No.	Day of Death.	Name of Deceased.	Age. Years.	Months.	Days.	Sex.
491	1	Jas. R. Stone	65	11	19	M.
490	2	Jennie Maud Clough	11	4	24	F.
492	4	Chas. Welch	60	..	..	M.
493	4	Harriet B. Holmes	68	..	..	F.
494	7	Infant of J. H and M. Kistler	..	..	..	M.
495	8	Pearl Sweet	.1	2	..	F.
496	8	Annie Shiffer	37	10	8	F.
498	15	Olley Sabrina Dell	1	3	..	F.
499	17	Roy Sawtelle	12	..	10	M.
500	19	Chas. V. Ekstein	..	7	21	M.
501	27	Ferren M. Chilcott	24	9	21	M.

Cause of Death.—490, scarlet fever; 491, gangrene, caused by embolism of iliac artery; 492, general debility; 493, paralysis; 494, still-born; 495, whooping-cough; 496, dropsy; 498, inflammation of the brain; 499, fracture of skull; 500, hæmorrhage of bowels; 501, consumption.

Color.—All white.

Nativity.—490, 494, 495, 498, 499, 500, 501, Michigan; 491, Mass.; 492, Ireland; 493, 496, New York.

Deaths in the city in February	11
Population, U. S. census, 1880	8,319
Annual death rate per 1,000 for month	16.653
Estimated population, 1884	10,000
Annual death rate per 1,000 est. pop	13.994

O. MARSHALL, M.D.,
Health Officer.

TO THE SEVERAL STATE BOARDS OF HEALTH:

Gentlemen:—At a meeting of representatives of State Boards of Health, held in Detroit in November, 1883, it was decided to call a meeting of the Secretaries or other rrpresentatives of all State Boards of Health, in Washington, D. C. in May, 1884, for the purpose of conference of State and other health officials in regard to general plans and special lines of practical work which they are called upon to perform, and with the view of the organization of a "Section" devoted to State Board work, in the American Public Health Association, or the formation of a permanent separate organization especially adapted to the needs of State Boards of Health.

Drs. Henry B. Baker, of Michigan, and J. N. McCormack, of Kentucky, were appointed a committee to confer with, and secure the coöperation of, all the State Boards in fulfilling the object of the meeting, and Drs. C. W. Chamberlain, of Connecticut, J. E.

Reeves, of West Virginia, and Stephen Smith, of New York, were appointed a committee on organization, to report at the meeting in May. The American Medical Association meets in Washington in May, and another reason for holding the meeting in Washington is that the representatives of the State Boards may have an opportunity for conferring with members of Congress from their respective States, in regard to national sanitary legislation. It would seem that whenever the health authorities of all the States shall meet, discuss, and agree upon the course they will pursue with regard to yellow fever, cholera, scarlet fever, small-pox, diphtheria, or any disease which endangers public health without regard to State lines or borders, and whenever all State Boards shall act in concert, considerable progress will have been made in solving the problem of what are the best methods for national action in regard to inter-State and marisme quarantines, or inspeetion and disinfection, as well as in the practical control of epidemic diseases within the several States of this country.

A reason for this proposed new mode of action is the belief among leading sanitarians intrusted with the official execution of practical health measures, that while the work of the American Public Health Association is of inestimable value in promoting the interests of sanitary science and sanitary reform, there is a constantly increasing need for an annual conference of State and other health officials in regard to practical affairs of their every-day work, some part of which work can not profitably be discussed in a public meeting consisting largely of persons not familiar with its details, and not directly responsible to the people for the best possible care for the safety of their health and lives.

In fulfilling the duty assigned to it at the meeting, this committee respectfully requests that your board appoint a delegate to the meeting in Washington, in May, 1884, and that you will cause to be sent to this committee, or to be given to your delegate, a certificate of the appointment of such delegate.

It is hoped that each delegate will be prepared to clearly detail specific subjects on which there is need for comparison of views, or for coöperation; and to express his own views, and, if practicable, the views of his board respecting the same. It is respectfully suggested that each delegate prepare a brief paper for presentation at the meeting; because in that way, better than in any other, will each delegate be prepared to express himself clearly and concisely, and the direction which the proposed associated action shall take be most likely to be that best calculated to aid and improve the several branches of the public health service in this country.

Very respectfully,

HENRY B. BAKER,
J. N. MCCORMACK,
Committee.

March 4, 1884.

First meeting to be held on the second day of the session of the American Medical Association.

BOOK REVIEWS.

GANTS' DISEASES OF THE BLADDER AND HAWE'S EXCESSIVE VENERY.—Excessive Venery, Masturbation, and Continence; the Ætiology, Pathology, and Treatment. By JOSEPH W. HAWE, M.D. New York: Bermingham & Co. 1884. pp. 299.

This volume contains the substance of a course of lectures delivered in the University of New York, supplemented as the writer states, by an account of the peculiar methods of treatment of various American and European authorities, thus forming a manual of reference.

The work has been done with no great thoroughness or completeness. In fact, as a work of reference it is not equal to several of the standard treatises from which it is largely compiled. Those parts of the work which are really most telling and attractive are the long quotations from Acton, Hammond (Male Impotence), and similar well-known works. We do not like the *tone* of the book. "Sons of Manhood" is a definition not too loose for the writer's taste, as he employs it more than once.

The value of a work which expressly treats continence among the causes of disease and insanity (p. 62) is at least highly questionable. Its pages abound in falsely colored statements set down as scientific facts, which are merely the theories of obscure writers, or else crude generalities of the author himself. There is an utter want of clearness in the statement of cause and effect, as in the satyriasis of phthisical patients, which he states as proof of the power of masturbation to cause consumption. Few more misleading or unnatural statements have ever been put in print than that "varicocele in young persons" is a "positive sign" of "masturbation or sexual excess—generally the former (p. 22)." See also p. 62: "Masturbation is a universal vice in civilized countries. A very large majority of both sexes indulge in the habit from early childhood. In savage lands it is of rare occurrence." Of which alleged facts no evidence is offered.

"Erotic tendencies," p. 66, are said to be "fostered by sedentary habits," a statement directly in contradiction to experience and good authorities.

On page 76 we find the following: "During sexual intercourse the expenditure of nerve force is compensated by the magnetism of the partner. In all cases, or in almost all cases, there is a return of that nature which prevents injury." Pseudo-pathology can exhibit itself in no worse light than in the above passage. What is this "nerve force" which is to be "compensated" by the magnetism of the partner? It would be well for the author to explain when and how he made this interesting discovery. We are almost forced to believe that the book was written partly for non-professional readers. Otherwise why are common names inserted in parentheses after the scientific?

The poor hypochondriacs who are described as having lost their "manhood," are the unhappy victims too often of books of this class. Their cases would present much less difficulty to the neurologist,

who, unfortunately, sees many of them, could he banish from their minds the rubbish of false pathology they have imbibed about "male impotence," "spermatorrhœa," and "emissions."

The words of Gant in his latest preface cannot be too often repeated to the profession in this connection. (See p. 6, "Diseases of the Bladder," by Frederick Gant, F.R.C.S., Bermingham & Co.) "The author having seen—and quite recently—so much deplorable error and misery resulting to patients from studying diseases of the urinary organs, he has written this treatise in a purely technical form; and thus to render the whole as unintelligible as possible to the public. The majority of the latter class would, indeed, be better able to walk barefooted to Jerusalem, than rightly to comprehend the greater portion of the text. The personal histories of the cases have been purposely omitted."

This has the manly ring, and is a fitting introduction to Professor Gant's fifth edition of his valuable treatise on the bladder, prostate and urethra. The work is well known in former editions, and comes out now enlarged and revised in some parts. The surgical anatomy of the parts is wholly rewritten, and now appears in very attractive form. In all discussions save on the subject of rapid improved lithotrity, the author's views are valuable and abreast of the day, but here there is a distinct failure to recognize the importance of the improvements of Bigelow, and the radical changes they have brought. The subject is handled too cautiously, and points are stated as still in doubt which have long since been completely established. Outside of this deficiency, which is not uncommon with English writers, the treatise is a thorough and complete one, in some respects more so than any other. This is especially true of the various unusual and obscure bladder and urethral affections whose treatment is too slightingly passed over in many American text-books. E. W. A.

The Hip and its Diseases. By V. P. Gibney, A. M., M.D., Professor Surgery New York Polyclinic; Asst. Surgeon Hospital for the Ruptured and Crippled, etc., etc. New York, Bermingham & Co., 1884. Pp. 412.

A prominent idea set forth in this work is defined as "conservatism," or "expectant" treatment of hip disease. A large amount of discussion is given to the relative merits of this expectant or waiting treatment and the mechanical treatment, so-called, of most orthopedists. It is evident that the author has been led into a vagary, in part resulting from a wrong point of view, and from want of comprehensiveness in his survey of the subject. As is often the case with specialists, the very minuteness of his knowledge has led him to become careless or oblivious of the most obvious and fundamental facts of his subject.

The author's mind seems incapable of receiving broad views. It is perversely narrow. The mechanical treatment of hip disease is *not* falling into disuse, and has not proved a practical failure, as the author in effect assures us. How any intelligent observer of the drift of professional opinion could make such an assertion, is not easy to understand.

The following illustrates the strange obliquity of the author's mental eyesight: "Year after year witnesses the introduction of new forms of apparatus, new methods of treatment, or revivals of the same principles in old apparatus, and year after year witnesses the failure of the same to meet the diseases set forth."

Here we find the significance of facts wholly distorted to meet a whimsical theory. The multiplication of orthopedic appliances, all designed to meet the same indication, on the same general principle, is the strongest possible evidence of the value and permanency of that principle. It would be as well to say that the numerous forms of pessaries are an argument against all pessaries, or that the existence of two or more methods of dressing a fractured limb is calculated to throw discredit upon the use of all splints and bandages. Every new hip splint invented is an item of evidence for, and not against, the mechanical treatment of hip disease.

The book is valuable for the minute information it contains on a large variety of obscure affections about the hip. A careful analysis of the varieties of hip disease has been elaborated in a series in the chapters entitled "Sprains of the Hip" (chap. III), "Neuroses of Hip" (IV), "Rheumatism of Hip" (V), "Coxo-Femoral Periarthritis" (VI), "Bursitis of Hip" (VII), "Acute Primary Synovitis" (VIII), "Acute Epephyritis of Hip" (IX), "Diastasis of Head of Femur," "Periostitis of Hip" (X). These chapters are valuable summaries, and are all preparatory to the real important topic of the work, viz.: Chronic Articular Ostitis of the Hip, or real hip disease, whose discussion occupies the latter half of the book (chaps. XI–XVIII). This work contains the first complete chapter ever published upon Bursitis of the Hip, although many writers have alluded to the affection. E. W. A.

DOMESTIC CORRESPONDENCE.

FROM WASHINGTON.

On March 3 Mr. Willis introduced a bill into the House of Representatives (H. R. 5650) for the promotion of anatomical science and to prevent the desecration of graves. It provides for the delivering of such bodies as are to be buried at the public expense, and as coming from any of the charitable or correctional institutions of the District of Columbia, to the medical colleges of the District of Columbia. If the deceased should have requested that he be buried, should his kindred claim him within twenty-four hours after his death, or should the deceased be a stranger or traveler, the body shall be buried. Bonds are required that the bodies are to be used for a prop-

er purpose, and when that purpose shall have been accomplished the remains shall be decently buried. Imprisonment for three years at hard labor is the penalty for using such bodies for improper purposes, for removing them beyond the limits of the District of Columbia, for traffic in such material, and for grave robbing.

This is a measure that is very much needed here. There are three medical colleges in operation in the District, and a fourth on paper. One of them, the medical department of the Howard University, is under government control, for the benefit of the colored race. It has a hospital to draw its material from, and numbers some eighty odd students in attendance. The two remaining and older institutions are the Medical Department of the Columbian University, which has enrolled some eighty students, and the Medical Department of the Georgetown University, which has between twenty-five and thirty students. It would be within bounds to say that there were about 200 medical students pursuing their studies in Washington. Then the Army and Navy Medical Examination Boards have both at times held prolonged sittings here, in which they required material for their purposes. For years past to meet these demands there has been a constant necessary violation of the letter of the law, and it is not pleasant for otherwise respectable members of a community to know that they are obliged to place themselves in an equivocal position, where at any time, by carelessness or a mistake, they may arouse the emotions and feeling of their fellow citizens and bring down their wrath upon them. While in our sister cities it is only the older members of the profession who can call back at times their early experience in resurrecting for the amusement of their younger colleagues; we fear that not many miles away from here there still exists the type of the enterprising student, who is better adapted to such deeds of darkness than to his more prosy studies, who knows the use of the dark lantern, the pick, the rope, the sack and the flask of whiskey for the side pocket, better than he does the microscope, the stethoscope and the thermomemeter.

On March 7, the House of Representatives performed a very graceful act in awarding to the widow of the late Surgeon-General Joseph K. Barnes a pension of $50 per month, which is an increase of $20 over the regular rate of pension at $30 per month. Still there were some comments on the bill in general debate which were noteworthy. Dr. Barnes was Surgeon-General for eighteen years and seven months, and during that time drawing a recognized pay of $400 a month, besides those extras in the shape of commutation, etc., for this and that, which civilians do not understand and Congress tries to find out. Yet his widow is obliged to come before Congress an acknowledged pauper, in indigent circumstances. Mr. Tucker, of Virginia, calling himself an ex-rebel, was strong in his support of the bill, giving these facts as an instance of the expenses of living to officials in Washington, and calling to mind Barnes' services as those of a man who, for over forty years, faithfully served his country, who did duty on the frontier, went to the City of Mexico with Scott's victorious legions and went through all the dangers of the Seminole war, who stood by the bedside of the dying Lincoln, and rendered invaluable service to the dying Garfield, and never received any compensation for either.

NECROLOGY.

YANDELL, LUNSFORD PITTS, was born June 6, 1837, on the plantation known as Craggy Bluff, near Murfreesboro, Rutherford county, Tenn., at the home of his grandfather, Dr. Wilson Yandell. He was the son of Lunsford Pitts Yandell, who figured so conspicuously in the annals of medicine in the West from 1837 to 1878, when he died in Louisville. Lunsford P. Yandell, Jr., was brought by his parents to Louisville a few months after his birth. He was educated in the private schools, enjoying the rare advantages of a personal training by that great teacher, Prof. Noble Butler, in his palmiest days. At the early age of 17 he began the study of medicine, and three years after (1857) graduated from the Medical Department of the University of Louisville. He went with his brother to the old Louisville Dispensary, and there remained, as chief of the clinic, for about a year. During the same time he had charge of the preparation and management of the clinical course at the Louisville City Hospital. In 1858 he went to Memphis, Tenn., to begin the practice of his profession. In 1859 he was appointed to the chair of Materia Medica and Therapeutics in the Memphis Medical College. In this place he won the reputation of being an earnest student and an eloquent teacher. On the 4th of May, 1861, when the war cloud was gathering over the South, he enlisted as a private soldier in the Fourth Regiment Tennessee Volunteers, for the service of the Confederacy. In a few months his knowledge of medicine became known in the army, and he was transferred from the ranks to the place of Assistant Surgeon, subsequently being promoted to the rank of Surgeon. Afterward he became Brigade Surgeon and Medical Director, serving on the staffs of Gen. Polk and Gen. Hardee. He was an active, industrious, enthusiastic student of his profession, a man of amiable disposition and great personal magnetism. He won an enviable name in the medical department of the army. When the fortunes of war turned against the cause he had espoused, and the great army of the South was scattered and almost annihilated, he took the oath of allegiance in North Carolina, April 15, 1865, and sadly turned his face toward Louisville. Here he practiced in the office of his brother, who had preceded him by a few weeks in his return from the South. In 1867 he attended the International Medical Congress, at Paris. While abroad he visited the great hospitals of the continent, as well as those of Great Britain and Ireland. He wrote many interesting letters during the tour; one of the most noted was that in which he detailed his personal experience in the great Vienna Hospital for Skin Diseases. He conceived

an intense disgust for the personal habits and professional deportment of the great dermatologist, Hebra, and contrasted this man with Erasmus Wilson, of London, whom he regarded with high favor. Returning home in December, 1867, Dr. Yandell was married to Louise, daughter of W. R. Elliston, of Nashville.

He settled down to the business of his profession, and in 1869, he was appointed to the chair of Materia Medica and Clinical Medicine in the University of Louisville. There had been great dissensions in the Faculty of the University; the venerable Dr. Louis Rogers and others of the Faculty had resigned, a new organization was determined on, and the trustees of the school wisely concluded to fill the vacancies with young men. Accordingly, Lunsford Yandell, E. R. Palmer, J. W. Holland and R. O. Cowling entered the school. Yandell was the oldest of the four. The University prospered, and rose rapidly to an enviable place among the best institutions of the country. In 1881, Cowling died suddenly, vacating the chair at the University and his place as chief editor of the *Medical News*. Less than two years ago, Lunsford Yandell became the senior editor of the *News*, and his death now for the second time leaves the senior editorship of the *News* and a chair in the University vacant.

Lunsford Yandell was one of the best known men in the profession of this city. He was a man of fine physical development, above six feet in height, of magnificent proportions, and about 200 pounds weight. He had dark complexion, dark eyes, black hair and beard. He was a prince in society, a very popular general practitioner of medicine, and an orator of such force and ability as are rarely found in the medical profession. He cherished an intense love for truth and justice, he was clear-headed, honest and independent. He took great interest in the organization and maintenance of medical societies. He cherished an intense love for the Code of Ethics of the American Medical Association. There was absolutely nothing small in Lunsford Yandell's nature. To-day, he entered warmly into a discussion of a question before a medical society, and although his views were not sustained, the genial smile and good will with which he met his opponents conquered all personal enmity, and won for him the very first place in the esteem of all who knew him. Men whom he did not like personally; whose professional opinions were distasteful to him, he spoke of in the most charitable manner, and when he could find nothing to say in their favor, he frequently was heard to exclaim, "Well, I don't like him, but I believe he is a truthful man, and honest in his convictions." Medical politics in Louisville, during the last fifteen years, have at times developed considerable excitement, disturbing now and then the whole community. In all these questions, Lunsford Yandell has been a leading character. He has always been in the foreground, earnestly contending for what he believed to be the right. His antagonisms have been more general than those of almost any other man in the profession.

His contributions to the literature of medicine are to be found in the *Atlanta Journal of Medicine and Surgery*, in the *Nashville Journal*, and in *Louisville* and *Richmond Medical Journal* of 1867, in the *American Practitioner*, *Medical Herald* and *Medical News*, the latter of which he edited jointly with the late Dr. Cowling from 1878–1880; with Dr. L. S. McMurtrie from July, 1882, to September, 1883, and with Dr. H. A. Cottell from the last-named date to March, 1884.

His most noted literary contribution was to the American Dermatological Association, on the "Predisposing Causes of the Dermatoses." He believed that scrofula, syphilis and malaria were predisposing causes of all but the parasitic diseases of the skin. He believed that mercury, cod liver oil, iodide of potassium and quinine might be relied upon for the cure of all but parasitic diseases. He rejected absolutely all recent discoveries in physiology and medical microscopy. He believed the microscope had greatly retarded clinical study. He had very peculiar and deeply rooted opinions concerning the actions of medicines, derived in great part from his personal experience in the use of drugs, both in his own person and as he observed them in his practice. He believed that the medical practitioner should take sufficient doses of the drugs he prescribes to learn the effects in his own person, and in this way he was led to reject a very large part of the generally accepted doctrines concerning the action of medicines.

Lunsford Yandell was a very active man as a practitioner, as well as a teacher. Whilst he did much to mold the policy of the University Medical School, he exercised a wide-spread influence in molding popular opinion concerning the practice of medicine in Louisville. His patients adored him, and although he made many enemies, as every positive and determined man must, he controlled a very large *clientale*. On the 12th day of March, 1884, Dr. Yandell was busily engaged with his practice until late in the afternoon, when he met a friend in the street who got in his buggy to ride with him for company. He said to this friend, "I am in better health than I have been for years, with the exception of neuralgia, which I find is generally relieved by chloral. He finally drove up in front of his residence after 6 P. M. Alighting from his buggy, he went into the house, took 30 grains of chloral, and, presently feeling better, expressed a desire for something to eat. His wife left him for a few minutes to have the meal prepared, and on her return found him insensible. She telephoned immediately to his brother, Dr. David Yandell, who being himself confined to bed, sent his office partner, Dr. Roberts.

The symptoms growing rapidly more alarming, other medical counsel was sought, and in a few minutes Drs. Roberts, Octerlony, Holloway and Scott, arrived, just in time to witness the last gasp for breath, at 8 P. M. Dr. L. P. Yandell died at his residence in this city. A more profound sensation and general shock never before was created in this community. When the morning papers appeared it seemed that every body in Louisville felt compelled to rush to the scene of the calamity. On the evening of March 13 the Louisville Medical Society, which Dr. Yandell assisted in founding, met in regu-

lar session, and resolved to do no other business than to consider the untimely death of Dr. Yandell. On the same evening, the old College of Physicians and Surgeons, the oldest medical society in the West, convened for the purpose of giving expression to sentiments of sorrow for the loss of one who had, in times past, been a leading member. Other medical bodies of the city met for similar purpose. On the 14th of March, at 3 P. M., the funeral ceremonies began at St. Paul's Episcopal Church. On the arrival of the cortege, every inch of standing room in the church edifice, in the vestibules and in the street about the entrance way, was occupied, the throng swelling, till it extended for squares in every direction. When the procession left the church and started to the cemetery to return to the earth the last earthly remains of the great physician, such a concourse of people was never before seen in Louisville, on any similar occasion. D. S. R.

MISCELLANEOUS.

AMERICAN MEDICAL ASSOCIATION.

PHILADELPHIA, 1400 PINE STREET, Southwest Corner Broad.

The thirty-fifth annual session will be held in Washington, D. C., on Tuesday, Wednesday, Thursday, and Friday, May 6, 7, 8, 9, 1884, commencing on Tuesday, at 11 A. M.

"The delegates shall receive their appointment from permanently organized State Medical Societies, and such County and District Medical Societies as are recognized by *representation in their respective State Societies*, and from the Medical Department of the Army and Navy, and the Marine Hospital Service of the United States.

"Each State, County, and District Medical Society entitled to representation, shall have the privilege of sending to the Association one delegate for every ten of its regular resident members, and one for every additional fraction of more than half that number: *Provided*, however, that the number of delegates for any particular State, Territory, county, city, or town shall not exceed the ratio of one in ten of the resident physicians who may have signed the Code of Ethics of the Association."

Secretaries of Medical Societies as above designated are earnestly requested to forward, *at once*, lists of their delegates.

Also, that the Permanent Secretary may be enabled to erase from the roll the names of those who have forfeited their membership, the Secreteries *are, by special resolution*, requested to send to him annually a corrected list of the membership of their respective societies.

SECTIONS.

"The Chairmen of the several Sections shall prepare and read, in the general sessions of the Association, papers on the advances and discoveries of the past year in the branches of science included in their respective Sections. * * * * *."—*By-Laws*, Art. 2, Sec. 4.

Practice of Medicine, Materia Medica, and Physiology.—Dr. J. V. Shoemaker, Philadelphia, Chairman; Dr. W. C. Wile, Sandy Hook, Ct., Secretary.

Obstetrics and Diseases of Women and Children.—Dr. T. A. Reamy, Cincinnati, Ohio, Chairman; Dr. J. T. Jelks, Little Rock, Ark., Secretary.

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Ophthalmology, Otology, and Laryngology.—Dr. J. F. Chisolm, Baltimore, Md., Chairman; Dr. J. L. Thompson, Indianapolis, Ind., Secretary.

Diseases of Children.—Dr. Wm. Lee, Baltimore, Md., Chairman; Dr. W. R. Tipton, Las Vegas, New Mexico, Secretary.

Oral and Dental Surgery.—Dr. John S. Marshall, Chicago, Ill., Chairman; Dr. T. W. Brophy, Chicago, Ill., Secretary.

A member desiring to read a paper before any Section should forward the paper, or its *title* and *length* (not to exceed twenty minutes in reading), to the Chairman of the Committee of Arrangements at least one month before the meeting.—*By-Laws*.

Committee of Arrangements.—Dr. A. Y. P. Garnett, 1317 New York Avenue, Washington, D. C., Chairman.

WM. B. ATKINSON, M.D.,
Permanent Secretary.

THE BRITISH MEDICAL ASSOCIATION—MEETING AT BELFAST.

The fifty-second annual meeting of the Association will be held on July 29, 30, and 31, and August 1, 1884, at Belfast, under the Presidency of James Cuming, M.A., M.D., F.K.Q.C.P.I., Professor of Medicine, Queen's College, Belfast.

The address in Medicine will be delivered by Sir Andrew Clark, BART., M.D., F.R.C.P., Physician and Lecturer on Clinical Medicine, London Hospital.

The address in Obstetric Medicine will be delivered by George H. Kidd, M.D., F.R.C.S.I., Master of the Coombe Lying-in Hospital, Dublin.

The address in Physiology will be delivered by Peter Redfern, M.D., F.R.C.S.E., Professor of Anatomy and Physiology, Queen's College, Belfast.

Visitors coming from America to attend this meeting, can travel by any of the following routes:

1. A "Cunard" steamer will leave (*a*) New York on Wednesday, July 16, arriving at Queenstown about the following Thursday week, July 24. (*b*) Boston on Saturday, July 19, reaching Queenstown the following Monday week, July 28.

2. A "White Star" steamer will leave New York on Saturday, July 12, and on Saturday, July 19; due at Queenstown about July 20 and July 27.

3. An "Inman" steamer will leave New York on Tuesday, July 15; due at Queenstown about July 23.

4. An "Allan" steamer will leave Quebec on Saturday, July 19, arriving in Londonderry about the 26th or 28th July.

5. An "Anchor" steamer will leave New York on Saturday, July 19; due at Londonderry on July 29.

Londonderry is 95 miles from Belfast, and trains run daily between the two places.

The route from Queenstown to Belfast is from Queenstown to Cork, Cork to Dublin (165 miles by train), and Dublin to Belfast (113 miles).

Communications in reference to the meeting of the British Medical Association at Belfast to be addressed to the Hon. Local Secretaries, John Moore, M.D., Alexander Dempsey, M.D., John W. Byers, M.A., M.D.

MEETING OF THE INTERNATIONAL MEDICAL CONGRESS AT COPENHAGEN.

The time of the meeting of the British Medical Association at Belfast has been fixed so as not to interfere with the International Medical Congress, which is to begin at Copenhagen on August 10.

A steamer will leave Hull, England, on August 2 and 9, for Copenhagen; and on August 5 a steamer will leave Leith, Scotland, for Copenhagen. Both these places (Hull and Leith) can be reached on any day by leaving Belfast on the previous evening by the cross-channel steamers. Visitors, after attending the meeting of the British Medical Association in Belfast, will have ample time to travel to Copenhagen for the Congress.

THE RELATIONS OF THE ENGLISH MEDICAL MAN TO HIS ARISTOCRATIC PATRONS.—There is nothing perhaps that shows more strikingly the difference between the members of the medical profession in this country and those in England, than the reading of the editorial by the *Lancet*, headed "His Lordship's Four Medical Attendants and Butler." The article is very good in itself, but the idea that there should be any occasion for writing it, is what strikes one as being so preposterous. It is simply a comment on a recently published notice in the *Times* of the obsequies at the funeral of the late Lord Hertford, in which, in mentioning those present, occurs the sentence "four medical attendants and butler." The *Lancet* thinks that physicians and surgeons are not justified in attaching themselves to the household of great families—always excepting the Royal household—and that if they do they may consider themselves happy at being allowed a rank so high as to be associated with the butler.

NEW BOOKS.

Richelot, G. Traitement de l'engorgement du col utérin par les cauterisations avec le caustique Filhos. 8vo. 74 pp. Paris: G. Masson. 2f 50c.

Bollinger, O. Zur Ætiologie der Tuberkulose. 8vo. 11 pp. München: Rieger.

Bostrœm, Eng. Beiträge zur pathologischen Anatomie der Nieren. 1 Hft. mit 4 Taf. 4to 48 pp. Freiburg i/Br. Mohr.

Eversbusch, G. Ueber einige Veränderungen der Plica semilunaris. 8vo. 20 pp. München: Rieger.

Frommann, C. Untersuchungen üb. Struktur, Lebersenscheinungen und Reaktionen thierischer und pflanzlicher Zellen. Mit 3 lith. Taf. 8vo, viii. 346 pp. Jena: Fischer.

Hueter, C. Grundriss der Chirurgie. 2 Aufl. 1 Bd. mit 176 Abbildungen. 8vo. xvi. 504 pp. Leipzig: F. C. W. Vogel.

Byrtt, Jos. Lehrbuch der Anatomie des Menschen. 17 Aufl. 8vo. xviii. 1,095 pp. Wien: Braumüller.

Kehrer, Ferd. Adolph. Beiträge zur klinischen u. experimentellen Geburstkunde u. gynäkologie. 2 Bd. 2 Hft. Giesseu: Roth.

Kupffer, C. Epithel u. Drüsen d. menschlichen Magens, mit 2 Taf. 8vo. 22 pp. München: Rieger.

Ludwig, Ferdinand. Zur Anatomie der Zunge. Mit 51 doppelten u. 2 einfachen Taf. 4vo. 108 pp. München: Litherarisch-artist Anstalt.

Tracy, Roger S. Handbook of Sanitary Information for Householders; containing facts and suggestions about ventilation, drainage, care of contagious diseases, disinfection, food and water; with appendices on disinfectants and plumbers' materials. New York: Appleton. 3,110 pp. 16mo. cloth, 50c

Barthez, E., et A. Lanné. Traité clinique et pratique des maladies des enfants. 3e editition, 7, 1. 8vo. iv. 944 pp. Paris: Alcan, 16f.

Cyr, J Traité de l'affection calculeuse du foie. 18mo. vi. 345 pp. Paris: Delahaye et Lecrosnier.

OFFICIAL LIST OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT UNITED STATES ARMY, FROM MARCH 15, 1884, TO MARCH 21, 1884.

Bache, Dallas, Major and Surgeon, leave of absence still further extended seven days. (Par. 1, S. O. 50, Hdqrs Department East, March 14, 1884.)

Matthews, Washington, Captain and Assistant Surgeon, to be relieved from duty in the Department of the Missouri, and to report in person to the Surgeon-General of the Army for duty in his office. (Par. 12, S. O. 62, A. G. O., March 15, 1884.)

Black, Charles S., First Lieutenant and Assistant Surgeon, assigned to duty at Fort Concho, Texas. (Par. 6, S. O. 30, Hdqrs. Department of Texas, March 10, 1884.)

CHANGES IN THE MEDICAL CORPS OF THE NAVY FOR THE WEEK ENDING MARCH 22, 1884.

P. A. Surgeon T. H. Streets, from Museum of Hygiene, Washington, for duty in the Coast Survey service.

P. A. Surgeon C. H. H. Hall, from the Naval Academy to the Museum of Hygiene.

Surgeon Henry Stewart, ordered before the Retiring Board.

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THE AMERICAN MEDICAL ASSOCIATION

AND OF ITS SEVERAL SECTIONS 1883–4.

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Place of meeting, 1884, Washington, D. C.; Time of holding meeting, first Tuesday in May.

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ORIGINAL ARTICLES.

RESULTS OF AN EXAMINATION OF THE MARKET MILK OF CHICAGO, AND OF THE MILK OF COWS FED ON DISTILLERY REFUSE.

BY CHARLES S. BACON, M.D., SPRING PRAIRIE, WIS.

The following tables contain the results of a number of analyses made during the summer of 1883, at the laboratory of the Chicago Medical College, at the suggestion and under the supervision of Prof. Long. The writer is indebted to Dr. Oscar DeWolf, President of the city Board of Health, for procuriug forty-two samples of market milk through the sanitary police; also for aid in obtaining the samples from the distillery-fed cows. The rest of the samples were obtained by the college janitor, or by the writer, from milk wagons and depots. A few were secured from hospitals or from private houses. The specimens obtained by the police are numbered; the source of the rest is indicated in the table. On account of the care taken in getting the samples, it is believed that they fairly represent the milk sold in the city.

For practical purposes the detection of the ordinary sophistication, which consists in removal of cream and dilution with water, necessitates only the determination of the specific gravity and the percentage of solids and ash. Watering milk lowers its specific gravity, while skimming it increases the density; but a judicious combination of both processes will make the density normal, and hence the test by the lactometer alone is valueless. The determination of the solids, however, combined with the ascertainment of the ash, in order to eliminate any admixture of foreign coloring matter, is acknowledged to be sufficiently exact for ordinary purposes. It was not thought worth while to make use of the unsatisfactory creamometer.

In the more complete analysis of a part of the samples, the separation of the sugar, the nitrogenous matter and the fat was made by Ritthausen's method, 10 c.c. of milk were weighed and diluted to 100 c.c. The nitrogenous matter and the fat were precipitated by 5 c.c. of a solution of copper sulphate of such strength that 1 c.c. contained .020 grams. of copper oxide. This was rendered nearly neutral by a solution of potassium hydrate of such strength that 1 c.c. neutralized 2 c.c. of the copper solution. Now, the precipitate, consisting of copper, casein and entangled fat, is allowed to settle, and the supernatant sugar solution filtered, and the precipitate washed in a mercurial pump. The sugar solution is diluted to 250 c.c., and the amount of sugar determined by Fehling's solution made so that 10 c.c. is equal to .067 grams. of sugar. The precipitate is carefully dried in an air bath at a temperature below 110° C., and then weighed in an air-tight tube. It is then placed in an extracting apparatus, and the fat removed with ether. The process requires two or three hours. Then again dry the copper casein in the air bath and weigh it in the tube. The difference between this weight and that of the precipitate before the extraction of the fat gives the weight of the latter. This result is controlled by evaporating the ethereal extract, drying and weighing the residual fat. The nitrogenous matter is determined by burning the copper precipitate and subtracting the weight of its ash from the weight of the dried precipitate.

By adding the amounts of sugar, nitrogenous matter, and fat obtained in the manner just described to the ash obtained by burning the solids, it was found that the sum did not always correspond to the solids obtained by evaporating the milk. In order to ascertain whether the discrepancy was due to the quantity of the copper sulphate solution used in precipitating the casein and fat, a number of experiments were made. It was first found that 2 c.c., or more of the copper sulphate solution added to 100 c.c. of diluted milk, would give a clear supernatant liquid, while less than 2 c.c. would leave the supernatant liquid more or less turbid. As it appeared that the sum of the constituents was generally too small when a small amount of copper sulphate was added, a few samples were examined using first a small and then a larger quantity of copper sulphate. The following table shows the result:

		Ash.	Sugar.	Fat.	Nitrog. Mat.	Solids by Addition.	Solids by Evap't'n.
1.	2 5 c.c. copper solution	.70	4.31	2.04	3.17	10.22	11 39
	5 c.c. " "	.70	4.29	2 01	3 99	10.99	11 39
2.	2.5 c.c. copper solution	.64	4 34	1.85	2.83	9 66	10.18
	5 c.c. " "	.64	3.83	1.80	3.13	9 40	19.18
3.	2.5 c.c. copper solution	.72	4.49	4 74	3.45	13 40	14 13
	5 c.c. " "	.72	4.71	4.73	3.83	13.99	14.13
4.	5 c.c. copper solution	.82	4.69	5.33	4.07	14 91	14.83
	6.5 c.c. " "	.82	4.59	5.42	4.07	14 90	14.83

It is seen that the nitrogenous matter is considerably increased by using 5 c.c. of the copper sulphate solution instead of 2.5 c.c. It is not changed by increasing the amount above 5 c.c. The fat does not seem to be affected by the amount of the copper so-

lution. The sugar determination, in the last part of the second case, was undoubtedly inexact. It is not probable that the amount of copper affects the sugar determination if the solution was neutralized by the alkali. These observations, together with inferences from the table given below are, perhaps, sufficient to suggest the statement that 2 c.c. of the copper sulphate solution is required to precipitate all the fat, and leave a clear supernatant liquid; while a larger amount does not affect the quantity of fat; about 5 c.c. of the copper solution is required to precipitate all the nitrogenous matter.

Less than 5 c.c. of the copper sulphate solution, in many of the analyses, was used, and hence it is probable that the amount of nitrogenous matter can be determined more accurately by subtracting the sum of the fat, sugar and ash from the total solids. The results of the analyses will now be given, placing first the samples obtained by the sanitary police.

Sample.	Sp. gr.	Ash.	Sugar.	Fat.	Nitrog. mat.	Solids by addit'n.	Solids by evaporation.
Third Ward—							
1	1 029	.66	.....	.....	.....	.....	11.80
2	1.032	.75	.....	.....	.....	.....	11 79
3	1.030	.76	.....	.....	.....	.....	11.91
4	1.032	.....	.....	.....	.....	.....	.....
5	1.033	.72	.....	.....	.....	.....	13.14
6	1.0325	.79	.....	.....	.....	.....	12.96
7	1.032	.77	.....	.....	.....	.....	12.83
8	1.034	.65	4.45	2.83	3.28	.....	11.21
9	1.0335	.74	.....	.....	.....	.....	13.06
10	1.0315	.72	.....	.....	.....	.....	12.66
11	1.0315	.66	3.81(?)	2.39	4.58(?)	.....	11.44
12	1.032	.69	.....	.....	.....	.....	13.25
Fourth Ward—							
13	1.036	.68	.....	.....	.....	.....	11.87
14	1.033	.71	.....	.....	.....	.....	12 01
15	1.034	.71	5.19(?)	5.59	3.54(?)	15.43	15.03
16	1.037	.75	5.30(?)	3.02	3.84	12.91	13.72
17	1.033	.69	5.09	3.91	3.61	.....	13.30
18	1.0325	.72	.....	.....	.....	.....	12.37
Fifth Ward—							
19	1.030	.67	.....	.....	.....	.....	10.53
20	1.034	.69	.....	.....	.....	.....	12.48
21	1.0305	.63	4.34	3.51	3.14(?)	11.62	12.17
22	1.030	.67	.....	.....	.....	.....	11.44
23	1.024	.57	3.79	6.18	2.52(?)	13.06	13.77
24	1.0285	.62	.....	.....	.....	.....	11.28
25	1.031	.69	.....	.....	.....	.....	13.02
26	1.0305	.67	.....	.....	.....	.....	11.52
Sixth Ward—							
27 (2.5 cc. cu. sol.)	1.029	.64	4.34	1.85	2.83(?)	9.66	10.18
" (5 cc. cu. sol.)	1.029	.64	3.83(?)	1.80	3.13	9.40	10.18
28	1.035	.68	.....	.....	.....	.....	12.77
29	1.0325	.66	.....	.....	.....	.....	11.26
30	1.037	.80	.....	.....	.....	.....	11.47
31	1.032	.70	.....	.....	.....	.....	11.56
32	1.030	.72	.....	.....	.....	.....	11.09
33	1.028	.68	.....	.....	.....	.....	11.06
34	1.028	.58	.....	.....	.....	.....	11.17
Fourteenth Ward—							
35	1.0325	.75	.....	2.82	.....	.....	11.81 11.75
Fourteenth Ward—							
36	1.030	.68	.....	.....	.....	.....	11.90
37	1.032	.74	.....	.....	.....	.....	12.22
38	1.030	.60	.....	.....	.....	.....	11.06
39	1.0325	.70	.....	.....	.....	.....	12.41
40	1.0255	.66	.....	.....	.....	.....	10.85
41	1.035	.74	.....	.....	.....	.....	10.94
42	1.0325	.....	.....	.....	.....	.....	.....
Conrad Werner, 2457 Cottage Grove Avenue, Grocer	1.032	.69	.....	.....	.....	.....	11.44
J. W. Nichols, 2501 Cottage Grove Avenue, Grocer	1.031	.....	.....	.....	.....	.....	12.12
2401 Indiana Avenue, Grocer	1.034	.68	.....	.....	.....	.....	12.34
2615 South Park Avenue, Grocer	1.034	.71	.....	.....	.....	.....	10.45
Bakery, Cottage Grove Avenue, bet. 25th and 26th Streets	1.0225	49	3.15	1.53	2.12(?)	7.29	7.73
Furnished by private family. Manten's Dairy. P. Demarais.	1.030	.63	4.79	2.89	2.99	11.30	11.17
Furnished by private family	1.034	.69	.....	.....	.....	.....	11.99
Furnished by private family. Sinnett and Leonard, 2300 Wabash Avenue	1.032	.74	4.28	3.24	4.32	.....	12.58
Furnished by boarding house. Nevens Bros.	1.037	.77	4.66	1.73	3.67	.....	10.78
Furnished by restaurant	1.034	.64	.....	.....	.....	.....	11.04
Mercy Hospital (Coyle's Depot	1.035	.64	.....	.....	.....	.....	11.40
St. Luke's Hospital (2.5 c.c. cu. sol	.....	.70	4.31	2.04	3.17	10.22	11.39
St. Luke's Hospital (5 c. c. cu. sol	.....	.70	4.29	2.01	3.99	10.99	11.39
Dring & Curtis, 3910 Cottage Grove Avenue	1.037	.67	4.89	2.41	3.84	.....	11.81
Coyle's Depot, 26th St.	1.031	.66	.....	.....	.....	.....	11.72
McAdams' Depot, 26th Street	1.0305	.70	.....	.....	.....	.....	11.82
McAdams' Depot, 26th St. (another sample)	1.034	.66	.....	.....	.....	.....	10.95
Depot 39th and Dearborn	1.034	.68	.....	.....	.....	.....	12.11
Elgin Dairy, No. 3, Clinton Bros., 2117 Dearborn	1.035	.59	.....	.....	.....	.....	11.86
First can	1.031	.62	.....	.....	.....	....	13.09
First can (2.5 c.c. cu. sol. another sample.)	1.0305	.72	4.49	474	3.45(?)	13.40	14.13
First can (another sample, 5 c.c. cu. sol	1.0305	.72	4.71	4.73	3.83	13.99	14.13
Second can	1.033	.62	4.90	3.38	2.83(?)	11.73	11.96

The reaction was observed in about half of the samples, and was found acid in every case. The microscope was used in an examination of about a quarter of the samples. In many cases the number of large and medium-sized milk globules was found to be abnormally small. Colastrum corpuscles were seen in one sample, and small granular masses, probably of fungous nature, in another. The significance of these cannot be discussed. No other foreign substances were revealed by the microscope, and the presence of mineral coloring matter is rendered improbable by the normal ash. There remains, then, for discussion only the question of sophistication by means of skimming and watering.

At the outset a standard of normal mixed milk must be adopted. It is, perhaps, sufficient for the purposes of this article to accept 12.5 per cent. as the minimum amount of solids in normal milk. Without doubt healthy cows may sometimes give good milk which contains a less amount of solids, but these cases are so rare that the mixed milk from five or six cows would always contain the amount of solids indicated.

A study of the table shows that of the fifty-eight samples only thirteen, or 23 per cent., are unsophisticated. The average percentage of solids is 11.83. If the value of the milk in any given case is equal to the ratio between the solids and the standard taken, the value of the specimens examined would be about 95.5 per cent. of normal milk. But this number evidently places the value too high, since the average of solids is compared with the minimum of unsophisticated milk. By the table below it will be seen that the average amount of solids in the milk of swill-fed cows is 13.22 per cent. Comparing the market milk with this, its value is found to be 89.5 per cent.

This number, however, does not represent the real

value. If dilution were the only sophistication, it would be sufficiently near to the correct result. But in very few samples is watering the only fraud. If a specimen showed a very low specific gravity with a fair amount of solids, it might represent such a case. With the possible exception of number forty, these conditions are not filled. It is evident that from almost all the samples fat has been subtracted, and this leads to a consideration of the relative food value of the different constituents.

As a rough approximation, the potential energy of fat may be considered two times as great as that of sugar, and also two times as great as the available energy of casein. The quantity of fat thus becomes an important datum. Unfortunately, it was obtained in only 17 cases, and one of these, No. 23. must be omitted for reasons given below. The average percentage of fat in the sixteen samples is 2.73, In the twelve samples of swill milk, the percentage of fat is 3.96. Hence the market milk contains only 70 per cent. as much fat as the swill milk. In the swill milk, the fat is equal to about 30 per cent. of the solids. Calling its food value twice as great as that of the other constituents, it is worth six-thirteenths, or 46 per cent. of the milk. If, now, 30 per cent of the fat has been subtracted, about 14 per cent. of the food is removed.

Still further, it must be remembered that deviation from the normal proportion of food elements, which is assumed to exist in normal milk, causes a loss by requiring an excessive and uneconomical amount of certain ingredients to replace those which are deficient. This is probably an important consideration, but its significance cannot be expressed in figures.

These estimates will, perhaps, justify the conclusion that the market milk, when considered in respect to its nutritive value as determined by its potential energy, is not worth more than 85 per cent. as much as milk of swill-fed cows.

Attention has been called to sample No. 23. It might be supposed that the specimen was obtained from the top of the can, and therefore had an unusually large amount of cream. But if cream is a solution of sugar, casein and salts holding suspended the fat, the proportion of the substances in solution should be the same as in milk. The small amount of sugar and ash in this case leads one to infer that the milk was first diluted and cream then added. This was, possibly, a special preparation for an approaching policeman.

The last three samples, noted on page 12, were from cows grass-fed in pastures and yards. Granular masses were found in the second and third samples, and colastrum corpuscles in the third. It was chiefly intended to compare these results with those obtained by examining the milk of distillery cows.

The latter analyses are given in the following table. A few items in the history of each cow are included. The first nine cows were kept in one stable, the next three in another, and the last in a third. It may be worth while to say a word concerning the management of the dairies. The cows are bought in the country, or from drovers, or at the stock yards. Each cow has a young calf with her, which, the seller claims, was dropped by her a few weeks before. Sometimes, however, the cow refuses to own her calf, and the owner said that numbers three and nine had undoubtedly given milk for a long time before he bought them, although their calves were only a few days old. The prices paid range from thirty to sixty-five dollars. The cows, generally poor when bought, are fattened on the rich distillery food, and, after giving milk for four to ten months, they are sold for beef. From the time they are bought, till they are sold, the cows are kept tied or stanchioned in somewhat crowded stables. The number in a stable varies from five or six to three or four hundred. When many are together, one row faces another for convenience in feeding. Distillery refuse, with a little hay, constitutes their food. The floor is cleaned, and the temperature in summer moderated by flooding the floor with water. The stables are quite open and ventilation takes care of itself. Milking is done wice a day.

No	Age.	Condition	How long the cow has given milk.	Am't of milk per day.	Reaction.		Spec. grav.	Ash.	S'gar.	Fat.	Nitrog. matter.	Solids by ad.	Solids by evap
1.....	7 years	Pretty good	2 months	10 l.	Amphoterid(?)	acid(?)	1.028	.78	.....	.....	.....	.....	11.95
2.....	9 years	Good	18 months	8 l.	Alkaline		1.030	.68	4.24	4.64(?)	3.79	13.35	13.17
3.....	5 years	Poor	Farrow	4 l.	Amphoteric(?)	acid(?)	1.0285	.90	4.33	4.50	3.74	13.47	13.74
4.....	13 years	Poor	8 months	5 l.	Acid		1.030	.70	4.64	4.38	3.73	13.45	14.02
5.....	5 years	Good	1½ months	5 l.	Acid		1.0325	.70	4.81	3.38	3.52	12.41	12.47
6.....	9 years	Good	9 months	5 l.	Acid		1.033	.68	4.86	5.09	4.19	14.82	15.04
7.....	5 years	Good	6 months	11 l.	Amphoteric(?)	acid(?)	.....	.70	4.96	5 39	4.04	15 09	15.12
8.....	11 years	Good	5 months	13 l.	Amphoteric		1.033	.70	4.62	2.94	3.74	12.00	12.19
9.....	13 years	Poor	Farrow	4 l.	Neutral		1.027	.70	3.99	2.66	3.09(?)	10.38	10.71
10.....	5 years	.....	.....	.....	Acid		1.030	.72	4.51	4.04	3.42	12.69	12.89
11.....	6 years	.....	.....	.....	Amphoteric(?)		1.030	.84	.....	.....	.....	.....	11.77
									(Cu. sol, 5, c. c.)				
12.....	.....	.....	.....	.....	Acid		1.032	.82	4.69	5.33	4.07	14.91	14.83
									(Cu. sol. 6.5 c. c.)				
12.....	.....	.....	.....	.....	Acid		1.032	.82	4.59	5.42	4.07	14.90	14.83
13.....	.....	.....	.....	.....	.....		.....	.82	.....	.....	.....	.....	13.93

It needs no discussion to prove that the hygienic conditions, especially in the large stables, are bad. The lack of exercise, the want of ventilation, the presence of large quantities of organic matter, are conditions unfavorable to kine as to human beings. On the other hand, it must be said that the cows generally thrive under this treatment. They look fairly well and grow fat. The comparison of their milk with market milk has already been made. It will be seen that it is quite as good as the samples of milk from pasture cows.

Perhaps a word should be said concerning the method of getting the samples. Each cow was milked in presence of the writer, the milk well stirred and an average sample taken. The reaction was observed in the fresh milk. In addition to the samples given, the reaction of twenty-two more specimens was determined. Combining these with the twelve given cases, the results are as follows: acid, sixteen; alkaline, five; neutral, one; amphoteric, one; doubtful, *i. e.*, acid or neutral or amphoteric, eleven. Investigations, by different observers, have shown such great variations in the reaction of normal milk that no deductions can be made from the above results.

In conclusion, it may be said that neither the microscope, the litmus paper, nor the analyses show a bad condition of the milk. Sample number nine is poor, but that might be expected from an old, poor, and farrow cow, even if she had better surroundings. The proposition may then be made that harmful properties, if any exist, do not depend on a change in the main constituents of the milk, but in elements difficult to detect.

SOME OBSERVATIONS ON THE HYDROBROMATE OF HOMATROPINE.

BY T. E. MURRELL, M.D., LITTLE ROCK, ARK.

[Read before the State Medical Society of Arkansas at the eighth annual session, Little Rock, May 30 and 31, 1883.]

Homatropine was discovered in 1879 or 1880, about which there seems to be some doubt, since both Germany and England claim the discoverer.

Merck, of Darmstadt, first made the crystallized hydrobromate, the preparation now altogether used.

According to the last edition of the U. S. Dispensatory, the alkaloid is prepared from tropine, a substance obtained from belladonna, in combination with amygdalic acid and diluted hydrochloric acid.

Homatropine is quite similar to atropine, both chemically and physiologically. It is not so poisonous, and can be administered in far larger doses, thus avoiding those disagreeable symptoms so common to the use of atropine in the eyes, particularly in children. The most important differences between these two articles is in their relative action and duration on the pupil and accommodation.

In 1879, shortly after its discovery, Dr. Hermann Schäfer conducted a series of experiments with homatropine on the rabbit and on man, in comparison with atropine and duboisine. The following table contains a summing up of the average results. The strength of the solution used was ½ of 1 per cent. of each article.

	Atropine.	Duboisine.	Homatropine.
Beginning of mydriasis	14 min	8 min	9 min
Beginning of failure of acc.....	23 min	10 min	9 min
Pupil ceased to respond to light	25 to 30 min	15 min	15 to 20 min
Height of mydriasis reached	36 min	19 min	30 to 40 min
Total paralysis of acc. reached...	2¼ to 2½ hrs	1 hr.	min 1½ to 2 hrs
Duration of mydriasis	4½ days	4 days	24 hrs
Duration of paralysis of acc.....	4½ days	4 days	24 hrs

These observations are borne out by subsequent experiments, with perhaps slight differences. It will be seen that the pupil begins to dilate most quickly for duboisine, next for homatropine, and last for atropine; and remains dilated longest for atropine, next for duboisine and shortest for homatropine; and that it ceases to respond to light in the same order of dilatation. The loss of accommodation, as will be seen, has a different order. It fails first for homatropine, next for duboisine and last for atropine; reaches total paralysis first for duboisine, next for homatropine and last for atropine; and continues longest for atropine, next for duboisine, and least for homatropine.

This order is modified by varying the strength of the solutions; a stronger solution of atropine acting quickly on the accommodation and persisting longer, duboisine showing less difference, while homatropine invariably passes off in about 24 hours whatever the strength of the solution. A stronger solution of homatropine acts more quickly and powerfully than a weaker one; a 1 per cent. causing paralysis of the accommodation in 50 minutes, a 2 per cent. in 39 minutes, and a 5 per cent. in 20 minutes. Another important difference to be observed in the table is the persistence of total suspension of accommodation. With the one-half per cent. solution it is for atropine, 18 hours; duboisine, 12 hours; homatropine, 3 hours.

Schäfer tested further the effect of eserine in counteracting the effects of these mydriatics. He found that its effect was decided, but fleeting, for atropine; less fleeting and more decided for duboisine; while it completely controlled the action of homatropine.

The tendency of a strong solution of atropine to produce a scarlatinal rash and dryness of the pharynx and fauces in some persons, particularly children, is an objection to its use; but this is not very frequent and never dangerous, while the vertiginous sensations caused by even a one-half per cent. solution of duboisine in many persons offers a barrier to its constant use. No unpleasant constitutional effects have yet been known to result from the application of homatropine to the eye. From its fleeting action it cannot take the place of atropine where permanency of effect is required, as in the treatment of iritis.

It would doubtless answer the purpose here by using the stronger solutions and by frequent instillations, requiring more constant attention to the patient. There is, however, a most important place for homatropine in ophthalmic practice. In selecting glasses for the correction of astigmatism and hypermetropia it often becomes necessary to paralyze the accommodation in order to ascertain the exact refraction of the eyes. An agent that will do this

effectually and with the least inconvenience to the patient, is the one that would most naturally be chosen. Again, in ophthalmoscopic examinations it sometimes becomes necessary in order to study the fundus in detail, or to hunt for peripheral striæ in the lens to dilate the pupil. Whatever will do this with but a short period of annoyance to the patient is the agent so long desired. In the hydrobromate of homatropine we have an article that accomplishes both these ends most satisfactorily.

Of it the 15th edition of the *U. S. Dispensatory* says:

"When it is necessary to paralyze the accommodation the influence of homatropine is rather feeble and uncertain."

We need not be surprised at this when the only notice it receives is a short foot-note. The writer's experience, and that of many others, fully establish the certainty of homatropine as a paralyzant of the accommodation if properly employed.

The correct way of using it to paralyze the accommodation is to instil into the eye a drop of a one per cent. solution every half hour until three applications have been made, and after two or three hours total suspension of the accommodative act will almost invariably be found. Sometimes shortly after the last instillation the accommodation will be found in abeyance, but to be certain it is best to wait a couple of hours. To dilate the pupil for ophthalmoscopic examinations a single application of a one per cent. solution will give a wide pupil in thirty minutes.

The hydrobromate of homatropine is not a very stable salt, and it has been found to lose its strength when kept in solution. This tendency, on account of its expensiveness, is a serious objection to its use by those who have not very frequent demands for it.

About a year ago, Dr. W. F. Mittendorf, of New York, had the kindness to send me some powders of a one per cent. trituration of the hydrobromate of homatropine, sulphate of eserine and daturine, with which he was experimenting, with the request that I give them a trial. I did so, and was so pleased with them that I ordered more, and now constantly use them to the entire exclusion of solutions.

In these triturations the salts are thoroughly incorporated with acacia and sugar of milk, and when applied to the eye are perfectly bland, painless and non-irritant. It is claimed for them that they will not spoil by age, if kept dry. Some powders that I have kept a year are as effective now as when first received. It is only necessary to keep in a wide-mouth, stoppered bottle, and when used, to dust a little into the conjunctival sac with a camel's-hair brush. It is as convenient as any method of application, can be regulated as to quantity with the greatest nicety and is more thoroughly absorbed than a liquid form by reason of its gradual solution in the conjunctival sac.

In quite a number of trials of the trituration of homatropine, applied every half hour for three times, I have invariably found total paralysis of the accommodation one or two hours after the last application, and have successfully worked out the refraction. The patient can call the next day with the accommodation fully returned and try the glasses, so as to see what modifications will have to be made before ordering them ground.

One who has had some experience in selecting glasses will never order the glass adapted to the eye in total paralysis of accommodation. The loss of a few expensive glasses and expressions of disapprobation by the patient, will teach him better.

This is certainly a great saving of time and annoyance to the patient and greatly expedites the physician's work. When a patient comes from a distance it greatly incommodes him to wait a week or ten days for the effects of atropine to pass off in order to make the second test of the glasses. It is unnecessary here to discuss the necessity of using a mydriatic in determining the refraction of the eye in many cases. When using atropine, many persons refused to submit to the annoyance and disability of a week's mydriasis; and, besides, the prolonged exposure of the retina to the flood of light that enters the enormously enlarged pupil, sometimes induced a very intense hyperæmia of the optic disc, and occasionally of the retina.

With homatropine it will be seen that extreme dilatation of the pupil never continues longer than a few hours.

The safety, certainty and convenience of the hydrobromate of homatropine for the purpose mentioned should certainly assign it a fixed place in ocular therapeutics until some better remedy shall have been discovered.

I would call especial attention to the eligibility of the triturations, which seem to meet all the requirements for convenience, agreeableness, efficiency and permanence.

THE USE OF ERGOT IN A PARTICULAR PHASE OF PNEUMONIA. NOTES ON A RECENT CLINIC IN THE MEDICAL WARDS OF MERCY HOSPITAL, CHICAGO.

BY N. S. DAVIS, M.D., PROFESSOR OF PRACTICE AND OF CLINICAL MEDICINE.

At the medical clinic in the Mercy Hospital, on March 28, 1884, the attention of the clinical class was chiefly occupied with a case of broncho-pneumonia in the sixth day of its progress. The patient was an adult male, about 30 years of age; short in stature, but broad across the chest and shoulders, presenting a well-marked sanguine temperament, with some corpulency. His habits had not been strictly temperate, and his occupation that of a laborer, but mostly within doors. He had been subject to attacks of bronchitis for some winters past, and once to an attack of pneumonia, three or four years since. Six days since, while scrubbing floors, and exposed to cold draughts with wet feet, he was attacked with severe pain in the sub-axillary region of the left side

of the chest, accompanied by difficulty of breathing, disposition to cough, and such feelings of indisposition as compelled him to desist from his work and retire to bed. The symptoms named continuing to increase, with the development of considerable general fever, a physician was called, who prescribed some medicines, and placed a large blister on the left side of the chest. On the third day he was removed to the hospital. On admission, his face was deeply suffused with redness; lips dry and slightly purple; tongue coated; skin dry; pulse 110, soft; respiration difficult, with a mixture of dry and moist bronchial râles over the whole chest except the lower part of the left side, where there were less râles, but decided dullness on percussion. The temperature was 39° C. (102.5° F.); the expectoration was not copious, but intimately intermixed with blood. The urine was nearly natural in quantity, but deeper red in color, and the bowels inactive.

The diagnosis was general sub-acute bronchitis with acute pneumonia occupying the middle and lower part of the left lung, in the early part of the second stage, or that of exudation, when the fine crepitant râle of the first stage had given place to some mucous râles, with decided dullness on percussion. After allowing each member of the class to auscultate the patient and to note closely the existing symptoms and physical signs, and pointing out the anatomical changes, with the coexistent diagnostic signs and symptoms, in each stage of ordinary pneumonic inflammation, and the progress of the present case to this its sixth day, and the third after its admission into the hospital, the lecturer remarked that there was no fixed or routine treatment that was adapted to all cases of pneumonia, simply because the morbid processes which constitute the different stages of pneumonic inflammation or pneumonitis, are liable to be modified much by the previous condition of the patient, and the coincident meteorological and sanitary influences that surround him. Cases occurring in the early and middle periods of adult life, in otherwise healthy and vigorous subjects, and in localities free from the causes of either typhoid or malarious fevers, will have the first, or stage of vascular engorgement, characterized by higher temperature, more acute pain, fuller pulse, and a little longer duration; while in the second stage the exudation will be more plastic, and the hepatization consequently more dense, which will correspondingly prolong the third or stage of resolution; and in some cases render it incomplete from the permanent identification of the plastic material with the alveoli and connective tissue of the lung. This does not prevent the recovery of the patient, but leaves him with permanent diminution of air space, and more liable to subsequent degenerative changes in the altered lung. It is this class of cases that are greatly benefited by a prompt and free venesection in the first stage, before the exudative process has made any considerable progress. The prompt abstraction of blood in the first stage of this class of cases benefits the patient in three ways, namely: by directly lessening the vascular fullness, and thereby lessening the amount of the exudation that is to follow; by diminishing the plasticity of such exudation as does follow the engorgement of the first stage: and by enabling other remedies to act more efficiently immediately after the diminished vascular tension caused by the venesection.

On the other hand, cases occurring in the very young or the old, or in those previously debilitated; and more especially in those at any period of life who are and have been surrounded by active malarious influences sufficient to impair both vascular tonus and blood plasticity, the first stage will be shorter, the exudation in the second more rapid and copious, but less plastic, while in the third, if diffuse suppuration does not occur, resolution will be more rapid and complete. If to moderate malarious influences there have been added such sanitary surroundings as develop the causes of typhoid fever, there will be added a still greater diminution of blood plasticity with marked impairment of vaso-motor nerve force, and giving a depressed or debilitated aspect to the whole assemblage of symptoms from the beginning of the attack. Pneumonia occurring under these various modifying influences, seldom presents any time, however early, in which general bleeding would not be more likely to do harm than good. The lecturer stated that when malarious influences predominated, he had often seen the most prompt and decisive benefit derived from giving the sulphate of quinine in doses of three to five decigrams (grs. v to viii) every four hours, with from thirteen to twenty centigrams (grs. ii to iii) of ergotine between, in the first stage of the attack. The direct effect of these agents in restoring the tone of the pulmonary vessels, if given within a few hours after the commencement of the attack, so resists the vascular engorgement and thereby lessens the amount of exudation, as to render the subsequent stages very mild, if not abortive. In cases occurring under strongly typhoidal influences, the quinine is less efficacious and must be given in smaller doses.

But the ergot or its active principle, ergotine, given in conjunction with digitalis to give more steadiness and tone to the action of the heart, is perhaps the most reliable agent we possess for resisting the over-engorgement of the pulmonary vessels during the first stage of the disease.

This had been strikingly illustrated in two cases of recent occurrence under the observation of the lecturer. The first was an adult, male, aged about 40 years, whose business was at the Stock-Yards, and who, in addition to much exposure to wet and cold there, had been out in company until a late hour at night, and while returning home was attacked with chilliness and severe pain in the left side of his chest, followed by a rapid development of all the symptoms of pneumonia. His family physician was called early in the morning and adopted a mild and proper course of treatment. No alarming symptoms occurred until the end of the second day, when the exudation began to increase with such rapidity that before the middle of the third, the left lung was completely engorged and dull on percussion from the apex to its base, and there was commencing crepitation in the lower part of the right. The breathing was much oppressed, short and frequent, with coarse

mucous râles rapidly increasing in the larger bronchi; the pulse soft, weak and 120 per minute; extremities cool, but temperature under the tongue 39.5° C. (103° F.); face suffused with a flush of a leaden or purplish hue; urine scanty and deep red color, and a copious, thin, and very bloody expectoration. It became evident that at the same rate of progress, before the end of another day both lungs would be completely filled with exudation and the patient suffocated. Being called in consultation at this stage of progress, it was agreed that the patient should take two decigrams (grs. iii.) of ergotine every two hours, and ten minims of tincture of digitalis with aromatic spirits of ammonia half way between, and a dose containing thirteen centigrams (grs. ii) of quinine, and two milligrams (gr. $\frac{1}{30}$) of strychnine every four hours.

A blister had been drawn on the chest, followed by emollient poultices, and the latter were continued, with milk and tea or coffee for nourishment. Under this treatment, faithfully executed, before the end of the next twenty-four hours, the whole aspect of the case was changed. The color of the surface was improved, the respirations were slower and deeper, the pulse 108 and more full, the coarse râles less in the chest, and the bloody expectoration diminished one-half. The interval between the doses of the medicines was now nearly doubled, and the improvement not only continued, but the patient made an unusually rapid recovery.

The second case occurred about one week later, and in the North division of the city. The patient was a young man who had been too closely occupied for several months in a dark, or rather artificially lighted and poorly ventilated office, during which the general tone of health had become somewhat impaired. After some exposure to wet and cold he became affected with some soreness in his chest and cough, and called at his physician's office for advice. Nothing more than a moderate degree of bronchitis, with some gastric derangements, were detected, and he was prescribed for accordingly. After three or four days he was taken suddenly with severe deep-seated pain in one side of the chest, much difficulty of breathing, more frequent pulse, and rapid increase of temperature. In a few hours his physician found him with all the symptoms and physical signs of the first stage of pneumonia, occupying the middle and lower lobe of one lung, with slight mixture of blood in the expectoration. All the symptoms increased so rapidly that in less than forty hours from the commencement of the pneumonic attack as indicated by the pain in the side, a consultation was called. At that time the patient appeared to be in imminent danger from the rapidly increasing exudation, which had nearly excluded the air from the alveoli of one lung, rendering it dull on percussion from the clavicle to the diaphragm, with a beginning of the same process in the lower part of the other. There was a leaden hue and dull expression of the face; short and frequent respirations, with an abundant thin and very bloody expectoration, causing coarse, moist râles in the bronchial tubes; pulse soft, small, and 130 per minute; and temperature under the tongue 40° C. (104° F.), but the extremities were cool. The urine was red or high-colored, and less in quantity than natural, and the patient complained of great exhaustion. It was evident that a continuation of progress in the same direction for twelve hours more would prove fatal to the patient. It was agreed that the patient should take two decigrams (gr. iii) of ergotine every two hours, and thirteen centigrams (gr. ii) of quinine with two milligrams (gr. $\frac{1}{30}$) of strychnine every four hours, with milk, koumis, and beef-tea for nourishment. At the consultation the following morning, the attending physician thought the patient in collapse and actually dying. He had remained with the patient through the night; the quinine and strychnine had been given as directed, but instead of the ergotine, an equivalent quantity of Squibb's fluid extract of ergot had been given hypodermically. On examination the patient presented the following singular assemblage of symptoms: the extremities and whole cutaneous surface were cold and wet with perspiration; the pulse hardly perceptible at the wrists, but the systoles of the heart 100 per minute; and yet the respirations were slower, deeper, and almost free from râles of any kind, with less frequent cough and almost entire suspension of the bloody expectoration. In other words, there was decided improvement in the respiratory function, in direct connection with a nearly collapsed condition of the circulation and entire cutaneous relaxation.

With the arrest of the pneumonic exudation it was evident that if any influence could be brought to bear capable of restoring the tone of the cutaneous vessels, and increasing the force and steadiness of the cardiac action, the patient might still be rescued from his perilous condition and perhaps enabled to recover. To accomplish this, he continued the quinine and strychnia as before, but in place of the ergot he was given ten minims of tincture of digitalis, five of tincture of belladonna, and fifteen of the aromatic spirits of ammonia, in sweetened water, every hour until the skin became dryer and warmer, when the interval was lengthened to two hours. He was also to take small and frequent doses of milk and coffee for nourishment. The result was all that could be desired. At a third consultation sixteen hours later, the skin and extremities were warm and dry; pulse 100, and of fair volume, though easily compressed; respirations 24, and deeper than in the morning; cough not frequent, and the expectoration containing but little blood. The bowels had moved twice during the day, and the quantity of urine had increased. Percussion still showed dullness over a large part of the side first affected, but it was evident that the crisis of the disease had passed. The belladonna had induced some dryness of the mouth and fauces with moderate dilatation of the pupils. The same remedies, however, were continued, but at much longer intervals, and the case progressed subsequently to an early recovery without further unusual symptoms.

The lecturer stated in conclusion, that such cases strongly illustrated the necessity of so studying morbid processes as to be capable of appreciating the special character and tendencies of each individual

case, and acquiring such knowledge of the action of remedies as to be capable of selecting and applying the one best adapted to fulfill any given indication or meet any unusual emergency, without regard to the name of the disease.

ON REDUCTION OF DISLOCATIONS BY MANIPULATION.

BY M. M. LOUIS HUTCHINSON, L.R.C.S.I., ETC., CHICAGO,

I would wish to invite your attention to the reduction of dislocations by manipulation, in the hope that others, becoming interested in the matter, might assist us by their information and experience. When we consider that it is the most scientific method of procedure, inasmuch as for its skilful and successful application it entails a knowledge of anatomy and mechanics; and that it possesses the advantages of being easily applied without distress to the patient, and with such little exertion on the part of the surgeon that he can usually dispense with any assistance, and that, moreover, in the event of its failure the other methods can be tried immediately after; surely it is a subject worthy of more attention than it would seem to receive at present. It is seldom made the theme of a lecture, clinical or other; the text-books award it only a fleeting notice, and consequently the student devotes little study to it, as being a subject of no importance; and the average practitioner ignores it altogether, and has at once recourse to one of the forcible methods. I do not presume to disparage these methods, as I know full well that there are cases where they alone are successful; but I venture to submit that in the majority of recent simple dislocations—especially at the hip and shoulder-joints—manipulation should first get a fair trial. Occasionally, the flexions, rotations, etc., that have been described by surgeons, will not suffice, and then the surgeon must try other movements, impossible to clearly describe, but which will invariably suggest themselves to his intelligence—the manœuvers of French surgeons—and by these means he will seldom fail to obtain success.

When a student, I was first attracted by the facilities and advantages of this procedure, and in my own practice I have obtained the most satisfactory results from it. With your permission, I shall briefly describe my last case:

— Wright, wagon-driver, aged 35, suffered from a recent subcoracoid dislocation at the right shoulder-joint. He had had six previous experiences of this dislocation, it occurring with him from the slightest cause. In every case it had been reduced after considerable difficulty by the heel-in-axilla or other of these methods, and he complained that the force employed in these efforts was such that he always suffered for a long time from its effects. I placed him in the dorsal recumbent position, and standing a little behind and to his right side, I placed my left hand on his shoulder, with the fingers behind and the thumb in front—this enabling me at once to steady the part and to feel and guide the head of the displaced humerus—which in all such dislocations can be distinctly felt beneath the coracoid process. I next with my right hand seized his arm by the wrist in the extended position, this affording me the greatest leverage, and raised it in the line of his body to an angle of about 90 degrees; then semi-rotating outwards, I made the very slightest extension, and the bone glided at once into place. I bandaged the arm to his side, gave the usual directions, and in a fortnight the man had resumed his occupation, quite well, thus showing that a more speedy and complete recovery follows the reduction of dislocations by manipulation.

MEDICAL PROGRESS.

SURGERY.

A LEECH REMOVED FROM THE LARYNX FIFTEEN DAYS AFTER ITS ENTRANCE.—Dr. Ramon Sota y Lastra reports a case in the *Revista Medica de Sevilla* of a man 64 years of age, robust and vigorous, who presented himself at the clinic, complaining of an abundant discharge of blood from the mouth, which had persisted for 15 days. The voice was hoarse and diminished, respiration labored and interrupted constantly by cough. The patient had lost one of his brothers with consumption, he himself had suffered from frequent catarrhs; had abused the use of alcoholic beverages, particularly brandy. His voice was always hoarse, and he coughed frequently. Fifteen days previously, while sweating freely, he drank some cold water, felt a sense of constriction in the throat, lost his voice, and respiration became difficult. Since then he had coughed incessantly on account of a tickling in the throat. Soon after drinking the water he commenced to spit blood, in small quantities at first, then in abundance. The swallowing of liquids and solids was performed without difficulty. Sleep was almost impossible on account of threatening suffocation.

Examination demonstrated the absence of fever, the integrity of the inspiratory organs, redness and a granulated appearance of the pharynx. On the posterior wall of the pharynx, behind the velum palati, was a little blood clot. The laryngoscope revealed a leech adherent to the epiglottis, and so placed that its caudal extremity lay upon the summit of the right arytenoid. During the attempts at removal made with the laryngeal forceps, the body of the leech was placed across the glottis and within the trachea. It was only after the fifth attempt that the leech could be seized and removed in spite of the brusque movements of the patient. All the symptoms disappeared as if by enchantment. It was supposed that the patient drank of water containing leeches.

The possibility of confounding these symptoms with tubercular laryngitis, without the aid of the laryngoscope, is very striking, and all means, other than direct extraction, for the removal or killing of the leech, would be likely to produce acute pharyngo-laryngitis. —(*Gazette Heb. des Sciences Medicales*).

On the Treatment of Burns.—Dr. John Duncan (*Edinburgh Clinical and Pathological Journal*), uses in wounds produced by the actual cautery an immediate covering of salicylic wool and collodion. The result is that no suppuration takes place. The wool ought to be teased out to an exceeding fineness at the edges, and laid on in successive thin layers, each of which is brushed with the collodion after its application. It then adheres with great tenacity, and is not apt, even with rough usage, to loosen at the edges. Inasmuch as a very little displacement of the edge of the shield or any loss of adhesion would be fatal to the plan of treatment, it is well, in the first place, to extend the dressing largely beyond the margin of the sore, and from time to time to apply fresh wool and collodion to the margins. At every stage, three, four, five, or six weeks, the wound is beautifully and typically healthy, but it does not cicatrize completely under six weeks. In burns of the first degree there is no dressing which gives so great ease, is so little cumbersome, and interferes so little with the usefulness of the limb. If there be vesication, no matter from what cause, the most perfect freedom from pain, and the most rapid healing, is brought about by pricking the blister, and when it is thoroughly evacuated, covering it with wool and collodion. Where blisters have burst or been ruffled, a dressing which is more easily removed is preferable.

MEDICINE.

The Acute Arteritis which is Consecutive to Typhoid Fever.—Dr. Baéri has made an important contribution to the history of this affection in the *Revue de Medecine*, where he arrives at the following conclusions:

1. There can be produced as consecutive to typhoid fever, an acute inflammation of the arteries; affecting the great trunks as well as the secondary branches of the heart and principal viscera.

2. The acute arteritis of the great trunks (the only one referred to here) is particularly localized at the lower extremity (22 out of 24 cases cited); it is most frequently unilateral, and especially on the right side.

3. In order of frequency the arteries which are most involved are, the posterior tibial and femoral, then the dorsalis pedis, and nearly as frequently the popliteal and anterior tibial.

4. In those cases where the phlegmasia is of considerable extent, the process originates most frequently in the principal trunk, to extend successively to the collateral branches, but sometimes, inversely, it commences with the smaller vessels to extend to the trunk,

5. Arteritis begins at the period of convalescence, when most of the patients first get up and try to walk, and this explains why the affection is so common in the lower extremities.

6. The character of the fever does not seem to have any appreciable effect on the frequency of arteritis, it being met with quite as often in benign cases as in the graver forms of the disease.

7. With regard to the anatomical lesions, the clinical evolution and the termination of the affection, there are two varieties in the arterial inflammation: the acute obliterating arteritis, and the acute parietal arteritis. These are but slight varieties of the same disease.

8. The obliterating arteritis is, anatomically, an embryonic infiltration of the three tunics, disappearance of the smooth condition, which becomes unequal and vegetating, producing in consequence a secondary thrombus which progressively establishes itself as a cruoric clot more or less voluminous, and becoming later a dense, greyish mass, adherent to the arterial walls. Most frequently a certain degree of peri-arteritis accompanies the phlegmasia of the vascular tissues.

9. If the coagulation obliterates completely the lumen of the vessel, and a supplementary circulation is not rapidly established through the anastomoses, the limb mortifies and takes on the external characteristics of dry gangrene. In certain exceptional cases, from venous thrombosis or neighboring phlebitis, moist gangrene may follow or occur, instead of the dry form.

10. Obliterating typhoid arteritis shows itself as follows:

(*a*) Pain more or less severe, exactly along the course of the arterial vessels while sometimes it is restricted to a certain region (as the calf, popliteal space, Scarpa's triangle) it may occupy the whole length of a limb, from the toes to the hip, and even to the iliacfossa. This pain is greatly increased by pressure, certain positions, movements or walking.

(*b*) Very marked diminution in the amplitude of the arterial pulsations; sometimes total cessation.

(*c*) Swelling of the affected member, without œdema or redness, and later with the appearance of violet markings or spots of local cyanosis, resembling even the spots of purpura.

(*d*) Lowering of the local temperature, with or without slight disturbances of sensibility, such as formication, partial anæsthesia, etc.

(*e*) Appearance along the course of the artery of a hard cord, painful to the touch, by consecutive thrombosis.

(*f*) Dry gangrene is the ordinary mode of termination of this affection.

11. Parietal typhoid arteritis is only a much less severe form of the preceding, which has a number of symptoms in common with it, but which is distinguished from it by certain important peculiarities, and by its termination. Its characters are as follows:

(*a*) Pain along the course of the diseased artery, generally less acute and less severe than in the obliterating form.

(*b*) Marked diminution in the intensity of the arterial pulsations, even to a total, but temporary, disappearance of these pulsations. In certain cases the disappearance of the pulsations is preceded, by a variable period, by a considerable exaggeration of their amplitude.

(*c*) Swelling of the affected limb, without œdema or redness, and without the violet spots.

(*d*) Lowering of the local temperature in most cases. In some cases, however, the temperature of

the affected side is raised to several tenths of a degree above that of the sound side.

(*e*) Absence of the hard cord along the affected vessel.

(*f*) A cure is the common termination of this affection.

12. The acute arteritis consecutive to typhoid fever may be confounded with muscular pains, local myositis, or neuralgia, when the hard cord is not present. When it is present, the affection might be taken for a phlegmasia alba dolens or a lymphangitis. The differential diagnosis may be established by noting the symptoms as enumerated.

13. When it is demonstrated that these morbid phenomena have their seat in the artery, that is obliterated by a blood thrombus, the question to consider is whether the arterial inflammation is primitive or developed secondarily about an embolic clot detached from the heart. The presence of a bellows murmur, the weakness, the irregularity, the subdued tone of the sounds of the heart; the acuteness of the pain, its sudden recurrence with the symptoms of obliteration, and finally, the appearance of vascular disturbances in several regions remote from each other, would be in favor of embolism. The normal character of the cardiac sounds and rhythm, the slighter degree of pain, less abrupt but perfectly localized, and the tardy appearance of the ultimate sphacelus, would indicate the primitive arteritis.

14. As to its pathogenesis, typhoid arteritis proceeds from two principal factors—local and permanent irritation from infectious parasitic germs, and from profound disturbances of vaso-motor innervation.

MATERIA MEDICA AND THERAPEUTICS.

INVESTIGATIONS ON INTRA-OCULAR PRESSURE.—Dr. Ernst Gruser has published (*Arch. F. exp. Path. u Pharm.*) the results of some manometric investigations on the intra-ocular pressure, and the effect that atropine and eserine have upon it. By the aid of a specially-contrived apparatus, the author has arrived at the following conclusions: 1. By means of his manometer he is not only able to determine the amount of intra-ocular pressure, or tension, but he can also detect and estimate with accuracy any variations of that pressure. 2. The amount of the intra-ocular pressure depends directly on the height of the vascular pressure. Narcotism similarly alters both, compression of the aorta raises the intra-ocular pressure by from 4 to 5 mm. Hg. Compression of the carotid on the same side causes a rapid fall of 5 or 6 mm. Hg., which, however, gradually rises again to the normal pressure. Tying both jugular veins raises the pressure, but only temporarily. The rapid fall of the arterial blood-pressure which takes place at death is accompanied by a rapid fall in the intra-ocular pressure. 3. In a cat during life, the intra-ocular pressure is on the average equal to 28 mm. Hg.; when dead the pressure is always from 8 to 10 mm. Hg. 4. The movements of the muscles of the iris always affect the intra-ocular pressure, dilatation of the pupil always causing it to rise, and contractions to fall. Section of the sympathetic causes a fall of from 2 to 6 mm. Hg. in the intra-ocular pressure, as well as narrowing of the pupil; irritation of the same nerves causes a rise of the pressure of from 5 to 6 mm., with dilatation of the pupil. 5. Atropine applied to the conjunctiva in quantities sufficient to cause mydriasis raises the pressure (there is sometimes a transitory fall before the rise). 6. Eserine similarly applied causes the pressure at first to rise, but in all cases in less than an hour the pressure had fallen below the normal.—(*Cantrelblat F. Klinischt Medicin. Medical News.*)

ON THE USE OF RESORCINE.—*La France Médicale* publishes a brief of the latest researches in the use of this drug, as given in the *Rivista Internazionale di Medicina e Chirurgia.* M. Rhigi bases his views on 100 observations. He groups resorcine with the aromatics, as among the best antiseptics and most powerful antipyretics. In 62 cases of intermittent fever he found the drug to act promptly, to be well tolerated, and to be readily absorbed. In one case there were symptoms of intoxication, due to imprudence on the part of the patient, who took 4 grammes at a single dose. In another there was a sense of heaviness with pain in the stomach, and in still another a general pruritus, but these symptoms were only of short duration. For this affection he used 4 to 5 grammes daily in an aqueous solution of 100 to 150 grammes. As to its use in this and other affections, he comes to the following conclusions:

1. Resorcine is well tolerated. It produces, but only for a short time, vertigo and tinnitus aurium, congestion of the face, and, very rarely, a sense of weight or pain in the stomach; nearly always there is abundant perspiration for about an hour.

2. Employed externally it is not caustic, and does not give off any disagreable odor.

3. In miasmatic affections, it is a sure means of combatting the febrile temperature and of opposing the malarial infection.

4. It has a certain influence in reducing the recent tumefactions of the spleen, but does not act on chronic tumefactions.

5. In typhoid fever, pneumonia and erysipelas it has a prompt antifebrile effect, but has no influence on the elevation of temperature.

6. In acute gastro-intestinal catarrh, it is of an undoubted usefulness, and has a rapid and positive effect; it may be combined with bicarbonate of soda.

7. In acute blenorrhagic urethritis, it should be preferred as a local application to other means that are more irritating and less prompt in restoring the mucous epithelium.

8. In acute and positive conjunctivitis and in lesions of the cornea it is one of the best collyriums.

M. Masini uses it in solution in affections of the ear, as a detersive, a slight astringent, an antiseptic, and a caustic, preferable to phenic acid, as the latter is irritating, cauterizing and debilitating to the organism, and has a disagreeable odor; preferable to iodoform with its disgusting odor, and to boracic acid, which has much less antiseptic and antiputres-

cent qualities. For an antiseptic solution he used 1 or 2 per cent. of resorcine; in granular otitis, for a marked astringent effect, 4 per cent.; for a strong caustic solution, 50 or 60 per cent.; in otorrhœa, for injections, an aqueous solution of 2, 3, 5 per cent.; in parasitic affections, a vaseline ointment of 10 per cent.

M. Massei recommends warmly the use of resorcine in ozœna, in powder or as a nasal douche. He employs 2 grammes in 600 grammes of water. If this does not relieve he uses the powder, and if a radical cure is not effected, great relief to the odor is afforded.

Bromide of Arsenic in Diabetes.—The *Journal de Médicine et de Pharmacie de l'Algeri* tells us that this drug has been employed four times successfully by Dr. Arpad Bokai. He prepares as follows:

Mix the following in a glass tube:

Arsenious acid } .....aa O gr. 1.
Carbonate of potassa }
Distilled water..... 5 drops.

Heat to limpidity and add enough distilled water to make 10 grammes. Add four drops of bromine and let the mixture stand for a day, when it is ready for use.

A diabetic, 22 years of age, who, at the time of his admission to the clinic, could hardly mount the staircase, was entirely relieved in a little less than three months. In that interval he gained in weight 8 k., 100 gr., and the proportion of glucose, which had varied between 170 and 111 grammes a day, was reduced to 0. During the last days the medicine was suspended and the patient nourished with rice.

The patient was submitted at first to a strict diet for 17 days, which diminished the proportion of sugar to about one-half. He then received the bromide for 11 days in three-drop doses, which was increased to 6 drops a day, in consequence of which the proportion of sugar diminished rapidly, and the analysis gave only traces. After introducing certain modifications to the diet, a small quantity of sugar was noted in consequence for 27 days. Five drops of the bromide was given, and 150 grs. of rice added to the diet list. Finally the drug was abandoned, the diet restrictions removed, and the patient discharged relieved.

Investigations into the Physiological and Therapeutic Properties of Trinitrine.—M. Marieux has studied the effects of this drug, (Bull. et Memoires de la Soc. de Therapeutique) in 23 experiments made on guinea-pigs, frogs, rabbits and dogs, and on man. These experiments were made in the presence of M. Dujardin-Beaumetz, and with the assistance of MM. Eloy and Huchard, with the following conclusions:

1. Trinitrine acts on the brain by producing phenomena of congestion.

2. It accelerates the heart beat, dilates the peripheral vessels, and diminishes arterial tension.

3. This vascular dilatation seems to depend upon a paralysis of the great sympathetic.

4. It acts but feebly upon the respiration, which becomes irregular.

5. It has but little effect upon the secretions.

In toxic doses:—

1. It produces, in the lower animals, clonic and toxic convulsions.

2. With the rabbit and dog, the toxic dose is variable, but is very large in all cases.

3. In man it commences with 10 drop doses of the alcoholic solution.

In the therapeutic application:—

1. It is indicated in all cases where cerebral anæmia might lead to fatal results.

2. It gives good results in rebellious neuralgias of anæmic origin.

3. Its most marked action is in angina pectoris.

4. It is of no use in diseases of the kidneys or lungs.

5. It is contra-indicated in all affections where there exists active or passive cerebral congestion.

6. It can be administered very satisfactorily in 4 to 6 drop doses of the alcoholic solution of 1 to 100, in the 24 hours, either as a potion or in hypodermic injections.

7. When compared with the action of nitrite of amyl, it is less prompt and less sure, but its effects are more enduring. In many cases it would be well to combine the two.

The Physiological and Toxic Action of Ergotine as Illustrated by Case of Poisoning.—Dr. Debréne (*Bull. Génde Thérapentique,*) gives the case of a young woman 25 years of age, ordinarily in good health, but suffering for 8 or 10 years from hæmorrhages coincident with the menstrual flow, She rarely passed three or four months without having one, two or three attacks of hæmoptysis at the second or third day of her courses, the loss of blood being sufficient to produce an anæmic condition which prostrated her for some time. Examination of the chest showed no affection of the lungs. To relieve this condition Boryjean's ergotine was used with benefit, but on one occasion she took of her own accord a dose equal to 5 or 6 grammes of ergotine. This was in the morning (Nov. 6.); it checked the hæmoptysis, but not the menstrual flow. She took her midday meal with a good appetite; in the afternoon there were a few sharp pains in the abdomen; at 6 P. M. she took a cup of chocolate; in fact, up to that time there were no evidences of any poisonous effect. At 6:30 P. M. she complained of a severe, dull pain, deep in the lower part of the abdomen, and of a want of air. Soon after she lost consciousness. The symptoms which followed were a marked dryness of the mouth, throat, and skin, pericardial pain which was extreme, with great difficulty in respiration. A deep pectoral and epigastric pain seemed to follow the course of the bronchi and of the œsophagus, and was compared by the patient to rough rasping with a curry-comb. While continuous, the pain was increased at regular short intervals. Vertigo followed; obscurity of vision, ringing in the ears, a sense of weight in the head, and constriction of the temples, formication in the extremities, chilliness and general coldness, insensi-

bility of the integument to the touch, to pain, to cold and warmth. This anæsthesia began with the fingers and toes, to spread over the whole of the body, including the lips, tongue, etc.

At 10 P. M., in addition to theses symptoms, tonic and clonic convulsions set in, resembling epileptiform spasms and followed by contraction of the flexor muscles, the fingers being markedly flexed upon the palms of the hands; extreme pallor, respiration 50, pulse 50, axillary temperature 97.5. A subcutaneous injection af ether into the forearm produced ready relief of all the symptoms, and a gradual progress, with frequent temporary relapses, was made from this time on to recovery, which was established (Nov. 9), in three days. During the treatment 10 grammes of chloral and more than 12 grammes of ether were administered, with a large amount of coffee.

This case brings out in bold relief the physiological action of ergotine. It shows that the absorption of this drug by the stomach is slow and gradual, and may give rise to a false security. It shows that its action is not so fugacious as has been supposed, and that it is not eliminated so rapidly as has been supposed. It indicates the valuable assistance we have in injections of ether in combating the toxic action of the drug.

In spite of the large amount of coffee given, the amount of urine was not increased; it would seem as if the contraction of the minute blood-vessels of the kidneys prevented an abundant filtration. And this action upon the vessels would explain the vertigo, intellectual torpor, and feeling of extreme weakness, that is to say, the diminution of the spinal excito-motor power (anæmia of the brain and cord), the chills, lowering of temperature, dryness of the skin and cessation of the salivary, sudorific and sebaceous secretions, difficulty of respiration (accumulation of asphyxiated blood in the medulla oblongata), and the convulsive attacks (repletion of the veins of the nerve centers and sinuses of the dura mater).

The deep-seated pains in the chest and epigastric region were evidently due to spasms of the muscle fibers of the œsophagus and bronchi, just as the contraction of the skin was due to spasms of the little muscles attached to the hair follicles.

The most curious of these phenomena is the anæsthesia which was complete from the soles of the feet to the scalp, but which did not prevent the patient from appreciating strong, firm pressure, as if the muscular sense was retained.

OBSTETRICS AND GYNÆCOLOGY.

A FAVORABLE CASE OF RUPTURE OF THE UTERUS.—The *Annales de Gynécologie* give the details of this case in the words of Professor Pajot, and in his happiest style. The case occurred in a multipara. The midwife, after rupturing the membranes, called in a physician, who found the woman suffering from a severe pain in the abdomen, and losing considerable blood; he became demoralized and left the case, when the woman was brought to the clinic. Being anæsthetized, Pajot found a narrowing of the pelvis, a shoulder presentation, the placenta inserted on the inferior segment of the uterus, and a rupture of the vagina and uterus which had its seat in the anterior cul-de-sac, and was prolonged along the anterior wall of the uterus, being sufficient to allow the entire hand to pass through the orifice. The hæmorrhage was excessive. He performed version by external and internal manipulation, and delivered the trunk. The head was well flexed, and the inferior maxilla was easily reached, but it was impossible to disengage the head, on account of the narrowness of the pelvis, which required for its removal a single application of the cephalotribe. On the tenth day, the woman's temperature was 100.4; the pulse 100; she took bouillon and digested well. A diarrhœa which earlier in the case was very obstinate, had about ceased. On the thirtieth day her pulse was 84; temperature 99; well nourished, good color, and out of danger except from possible embolism or hæmorrhage.

OBSERVATIONS ON THE NORMAL TEMPERATURE OF THE HUMAN BODY.—Dr. William Carter, as Physician to the Royal Southern Hospital of Liverpool, has communicated some interesting records of temperature to the *Liverpool Medico-Chirurgical Journal*. After noting the observations so generally made regarding a periodical rise and fall in the temperature of man during the twenty-four hours, a minumum about 6 A. M., and a maximum between 4 and 9 P. M., independent of sleep, he set himself to work to determine whether this periodicity might not be modified in accordance with the ordinary habits of life, and selected for observation the night nurses and night sisters of the Royal Southern Hospital. Their routine is as follows: Rise at a quarter to eight P. M., down at twenty minutes past eight, breakfast at 9, and then enter on their hard duties. Their duties cease at 9 A. M. They take exercise till twelve, when they go to bed. Six of these were selected. They had performed this duty respectively, three years, ten years, seventeen months, two months (2), three weeks and lastly, the night of commencing observation was the first night of the new duty.

The temperature was taken every two hours, with the thermometer in the axilla for five minutes, and continued for five to six days. The record is given in detail, and establishes the conclusions: that a daily depression of temperature takes place in the healthy during night and early morning; that such a change of habit as turns night into day, so far as employment is concerned, does not permanently affect the character of this depression; that a daily range of from two to three degrees Fahr. may take place consistently with health; that an axillary temperature of 96°, or even lower, at some period of the night, is consistent with health, and that the character of the daily oscillation is not markedly affected by food.

The American Journal of Ophthalmology is the title of a new journal announced to appear next month, to be published by Jas. Chambers & Co. The editorial management is to be in the hands of Dr. A. Alt.—*St. Louis Courier of Medicine.*

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THE EDITOR of this JOURNAL would be glad to receive any items of general interest in regard to local events, or matters that it is desirable to call to the attention of the profession. Letters written for publication or containing items of information, should be accompanied by the writer's full name and address, although not necessarily to be published. All communications in regard to editorial work should be addressed to the Editor.

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MEDICAL COLLEGES AND THEIR ENDOWMENTS.—A medical college should not be an institution for the manufacture of physicians, but one where the science and art of medicine is taught, where their study and advancement is encouraged. The busy practitioner can seldom keep fully abreast of the times. This partial ignorance is offset by personal experience. The fact, however, makes a thorough drill in college especially desirable. Much has been written and spoken about the time requisite for the instruction of students, the laboratories and hospitals needed, and the personal attention from instructors that is desirable. Too much cannot be said on these points, but back of them all is the first and fundamental requisite —liberal endowments—both for the maintenance of laboratories and the support of professors. Students to-day cannot be taught as simply and inexpensively as fifty years ago. Science, and the practical teaching of it, has made too much advancement for that. Not only are dissecting rooms and chemical laboratories needed, but physiological and pathological as well. Clinical teaching has so far improved that where it is best taught the classes are small, and consequently many instructors are needed, or a great deal of time must be devoted to the work by a few. If many are employed, it is almost impossible to get enough thoroughly good teachers in even our largest cities to fill the places. When there are many it is seldom also that they take the same interest in their work that they would if they did more of it. Teaching becomes with them merely an extra labor, not the one their interest leads them to follow with most diligence. To properly care for a laboratory of any kind and give instruction in it, several hours consecutively must be devoted to it each day. This is more time than a physician dependent, even to a limited extent, upon his practice for support, can devote to it. If the professor's efforts are directed to building up and cultivating a practice by the aid of his professorship, he will not teach with the purpose of imparting the most information and drilling it into the students. Teaching of any kind to be efficient, must, as a rule, be done by those who are independent of the patronage of their school. They can then demand of the students the work and study that is really necessary. Professorships in medical colleges should be so well endowed that those who hold them could devote all their time either to teaching and the preparation for it, or to original investigation and the encouragement of it in others.

Our colleges are very poorly endowed. We cannot expect a change in this respect, however, until the medical men of the country become fully awakened to the fact, and make known the need of endowments to the laity. In the last printed annual report of the United States Commissioner of Education[1] it appears that of all the colleges in the country only seven have productive funds. The rest depend wholly on their income from tuition for support, and even the seven do practically the same, as will be seen from the following statement:

The Medical Department of Yale has a productive fund of $29,102, which yields an annual income of $4,251. The Medical College of Indiana has a fund of $1,000, which yields $50 yearly. Harvard Medical School has a productive fund of $280,391, which yields $7,141 annually. Kansas City Medical College has $1,000, which yields $100. The Medical Department of the University of Pennsylvania has $50,000, with an annual income from it of $3,000. The Medical Department of Howard University has $2,200, which yields $154 yearly. Meharry Medical Department of Central Tennessee College has $2,500, but by the report is not credited as receiving any income from it.

It is a matter of self-interest with our citizens that the physicians in their midst are thoroughly competent. Most persons place at once implicit confidence in the doctor they call. Their health, often their lives, are dependent upon his skill and knowledge.

They have scant means of measuring the ability of physicians. In no other profession can charlatans and pretenders work so safely. The giving of money

[1] Report for 1881, printed in 1883.

for the proper endowment of medical colleges will not, therefore, be a charity to a few medical teachers, but a means of protecting the public, as efficacious and as necessary as general and judicious laws regulating the practice of the profession.

There are schools that have been for years doing their utmost to furnish good teaching that are thoroughly deserving of aid. It is not new colleges that is required but a more efficient management of old ones.

MEDICAL SERVICE ON SHIPS.—During the past two years the subject of better medical service in merchant and emigrant vessels traversing the oceans has attracted considerable attention in England, and it is at present engaging the attention of prominent members of Parliament. It is well known that a large proportion of the ocean traveling is done in English ships and steamers, not only across the Atlantic, but also to Australia and the Indies. According to the following statements of Dr. J. A. Irwin, a well-known English physician, who has recently taken up his residence in New York, there is urgent need of improvement in the direction of more efficient and uniform government regulations concerning the supply of competent medical service on board of all vessels carrying passengers of any class on the oceans. Speaking of the English lines recently to a reporter for a daily paper, he says:

"Of all the lines? You must bear in mind that England has not one mercantile marine medical service but perhaps fifty, each under different orders and regulations, and varying in customs and conditions. There ought to be one national service. There is comparatively little cause of complaint with possibly two or three companies, but the others are open to many objections, more than I can think of enumerating. This diversity of the service is a strong ground of complaint, as it leaves no central responsibility for or power to correct abuses or neglect. There is no regulation or definition of the duties, responsibilities, status, salary, grade, or even of the accommodations of a surgeon on shipboard. There is no fixed pay, or rank, and no examination made of ship's surgeons by any official power. An economical company or miserly owner can engage any incompetent young medical graduate, without reference to anything but the lowest salary he will ship for or the highest price he will pay to practice on the passengers while taking a pleasure voyage or two. The highest wages now paid surgeons on steamships is only $50 a month, or about the wages of a cook or steward. Perquisites are few nowadays; so you see even the best steamers give very insufficient pay.

"Competent men can seldom be had at these rates; when such as are competent are forced by personal necessities to ship as surgeons, they remain aboard only until they can better themselves. Hence, there is little stability about the service, and you seldom find a really competent surgeon for any length of time in a company's employ. The companies and ship owners engage surgeons as they do seamen, by the voyage, and as a consequence are often forced to engage a new surgeon at a day's notice before sailing. Often crowded passenger-ships are sent out in medical charge of young and inexperienced surgeons, liable themselves to sea-sickness, and who do not even know what duties they will have to perform, for instance, on reaching quarantine in your port. At other times men in poor health, which in fact forces them to be at sea for their own strength, will be engaged as surgeons, Of course such cannot be depended upon to perform all the service demanded of them on a crowded vesssel. Then, there is another class still more objectionable; I may call them men ofdefective personal habits, incapable of commanding and retaining practice at their homes. There are many of these incompetents on English lines. Proof of it? Certainly. Here is a return made to Parliament by the Board of Trade last year. It shows that of 141 surgeons who, during the first six months of 1882, had full medical charge of ships carrying passengers to this country,—transatlantic steamers, mind you,—only 27 who possessed any qualifications as a physician and surgeon had reached 30 years of age. Forty-six were under 25 years. And here is a point which will astonish you. Sixty of them would have been ineligible through lack of professional qualifications for any appointment in our Army, Navy, asylum, prison or poor-law service. That is to say, these ships, and your Americans on board of them, have been dependent for medical advice on men who are pronounced by English law to be insufficiently qualified to treat English convicts and paupers.

"Now, I want you to understand that among the ships' surgeons some are all that they should be. I could name men who are competent to fill any position with honor. The trouble is that under the present circumstances the position seems made to suit the half-qualified youngsters, and the competent men are forced into it upon exactly the same terms. The return which I have just shown you, proves that on the 108 ships in question plying between this country and England, there were 33 medical officers who were either dismissed or resigned during the period

named. The surgeons have no assistance whatever on these steamers, not even a hospital nurse, and as a consequence, during the times of general sickness, one man cannot do all the work satisfactorily. I suppose you think that sea-sickness needs no treatment; but I have myself seen two cases of death from heart disease which would not have occurred if the violent vomiting from sea-sickness, which was the immediate cause, had been controlled by treatment."

Many might suppose that the short time now usually occupied in crossing the Atlantic, would give but little time for any other than sea-sickness, and consequently that the quality of medical service was of little consequence. This error will be effectually corrected by the following statistics given by Dr. Irwin:

English statistics, published by order of the House of Commons in 1882, show that of the thirteen principal English lines to this country the mortality in 1881 on one or two of the inferior lines reached one in every 509 of those embarking. The lowest rate was on the Inman line (one in every 3,313); but as this mortality was among immigrants who within a few days of sailing were passed as healthy, the rate is still too high. It must be remembered that these figures represent deaths on board during a short trip on the ocean—usually a healthy thing to take—of only eight or ten days. Further—and here is the most serious consideration—nobody can tell how many of the sick and enfeebled who are landed here die at their destinations of diseases contracted, but not fully developed, on board ship. The trip across the Atlantic is so short that the germs of contagious diseases caught on shipboard do not develop until the affected persons have passed quarantine and are possibly thousands of miles in the interior. Statistics are, therefore, incomplete and untrustworthy.

There is serious danger in this unsatisfactory medical service, not only concerning individual illness of the passengers, whether in the saloon or the steerage, but concerning the general health of the communities to which the passengers and immigrants are bound.

As the people of no country are more interested than those of our own, either in the healthfulness of ocean travel, or in the danger of importing contagious diseases into different parts of the country, it would be well for the profession here, as well as our government, to cordially coöperate with whatever intelligent and judicious efforts are made in England or elsewhere, to improve the medical service on ships of every class.

We make no apology for occupying so much space in the present number on the important subject of milk supply in large cities.

Medical College Commencement.—The twenty-fifth annual Commencement exercises of the Medical Department of the Northwestern University, better known as the Chicago Medical College, were held in the Grand Opera House on the afternoon of March 25, 1884. Rev. Joseph Cummins, President of the University, presided on the occasion and conferred the degrees upon the graduating class, which numbered thirty-eight in regular course, one ad eundem and one honorary. After the opening prayer and music, the Dean of the Medical Faculty announced the certificates for the under graduates, certificates for special work in the Hospital and Dispensary, and the award of prizes. The prizes for the two best theses were taken by C. S. Bacon, of Wisconsin, and George A. Staples, of Iowa. The Alumni prize for the best average scholarship in all the branches of the three years' study was taken by A. C. Helm, of Illinois; the Senn prize for the best anatomical preparation by T. H. Swayne, of Illinois; and the Microscope prize offered by W. H. Bullock of Chicago and J. Grunou of New York, to the candidate for graduation who should sustain the best examination in the theory and practice of microscopy, open for competition to the graduating classes in all the colleges of Chicago, both literary and medical, by C. S. Bacon, of Wisconsin. The practical working of the long college sessions, the thorough grading of classes, and the annual examinations of each class in its grade, instituted by this college is well illustrated by the following remarks of the Dean of the Medical Faculty, in presenting the present class of candidates for graduation to the President of the University:

"*Mr. President:*—The college class represented by the candidates for graduation before you entered their first year, numbering SIXTY-FIVE.

"The effect of the examinations in the branches of medicine embraced in the first year course, was such as to convince FOURTEEN of these that they had better seek some *shorter* and *surer* road to the principal object of their ambition, a *diploma*, and consequently the class in its second year numbered only FIFTY-ONE.

"The effect of the examinations in the studies of that year added to the first, produced the same convictions on TEN additional members. Consequently the class in its third and last year numbered FORTY-ONE.

"I regret to say that the result of the third year examinations has caused *three* (3) of these to be missing from the class as they stand before you today.

"These facts will justify me in assuring you that the 38 young men whom I present to you to-day as candidates for the degree of Doctor of Medicine, and for a formal admission into the ranks of one of the noblest and most responsible of professions, have been subjected to a patient, systematic and thorough course of medical training in every department, from the elementary work in the laboratories of anatomy, chemistry and histology to the direct practical study of disease at the bedside of the sick in the hospitals and dispensaries. More than this—they had been well prepared for professional studies by a good general education. *Seventeen* of the 38 are graduates of literary colleges in good standing, embracing some of the colleges and universities of the highest standing in our country. The remaining 21 have given the medical Faculty full evidence of possessing a good academic education. As the representative of the Faculty of the Medical Department of the University over which you preside, I take pleasure in asking you to confer on each member of the class here presented the degree of Doctor of Medicine, feeling a strong assurance that by their attainments, their industry, and their personal integrity they will prove an honor to their Alma Mater, and a blessing to the communities in which they may live."

SOCIETY PROCEEDINGS.

SUFFOLK DISTRICT MEDICAL SOCIETY.

SECTION FOR CLINICAL MEDICINE, PATHOLOGY, AND HYGIENE. ALBERT N. BLODGETT, M.D., SECRETARY.

Special Meeting, February 27, 1884. Meeting called to order at 8 o'clock, Dr. Robert T. Edes, Chairman, presiding.

The Chairman announced that Dr. Morris, of Philadelphia, who was expected to present an essay, was detained by sickness and would not be at the meeting. Dr. H. O. Marcy, however, had received the paper from Dr. Morris, and would read it. The title of the essay was

ON MILK SUPPLY IN LARGE CITIES[1]

Probably few persons whose attention has not been especially called to this subject have any idea of its importance in an economic as well as sanitary point of view; and it may therefore be well to preface what I have to present to you to-night with a statement, approximate only unfortunately, as full and reliable figures are hard to obtain, of the amount of milk—or what purports to be such—required daily in our large cities.

[1]By J. Cheston Morris, M. D., formerly Attending Physician to the Protestant Episcopal Hospital, Philadelphia.

Dr. H. A. Pooler, of Goshen, N. Y., estimates the amount sold daily in the cities of New York, Brooklyn, and Jersey City, at 500,000 quarts, or 182,500,000 quarts annually. I have elsewhere shown from the statistics furnished by the Railroad Companies and the Board of Revision of Taxes, that the amount in Philadelphia alone is 57,548,470 quarts. The supply of Boston I have sought for, but have not received a reply from the Secretary of the State Board of Health. But if we compare these figures with the population of the four cities named we find in round numbers as follows:

182,500,000	quarts	consumed	among	2,500,000	persons.
57,500,000	"	"	"	900,000	"
240,000,000	"	"	"	3,400,000	"

or about 70.6 quarts annually, or not quite $^2/_5$ of a pint daily for each man, woman, and child. This is rather more than the average of England, less than half that of Wales, not one-third that of Scotland or Ireland, and far below that of Norway, Sweden, Switzerland, and the Tyrol, as we learn from Edward Smith "On Foods" and Brassey "On Food and Labor." We may therefore fairly conclude that this is not an overestimate of the actual supply in these cities. If we now multiply these 240 millions by six cents, the *lowest* price paid by the *consumer* for the article, we obtain the amount annually paid by the inhabitants of these four cities, namely, $14,400,000, or nearly $40,000 daily. Surely then we may well pause for a moment to consider what it is that we buy at such a price, and what its real value is to us.

From Simon's Animal Chemistry, vol. ii., p. 62, we may deduce the composition of cows' milk as follows:

Water		860 parts.
Solids, Butter	36 parts	
Casein	68 parts	
Lactin, coloring matter, etc	30 parts	
Salts	6 parts	
In all	—	140 parts.
		1000 parts.

And Dr. P. Vieth, in the *Analyst* for March, 1883, gives the results of 12,430 analyses made for the Aylesbury Dairy Company, in London, during 1882, which practically accord with the above.

A quart of milk, of the average sp. gr. of 1.031 as given by Dr. Vieth, would then weigh at 60° F. about 15,092 grains, of which 12,979 grains would be water, and 2,113 solids. Of the latter there would be:

Butter	543.3 grains or nearly	1¼ oz. avoirdupois.
Casein	1.026.3 grains or more than	2⅓ oz. avoirdupois.
Lactin, etc	452.8 grains or more than	1 oz. avoirdupois.
Salts	90.6 grains or nearly	1-5th oz. avoirdupois.

If we now take these quantities and value them at market rates, say roughly:

1¼ oz. butter @ 30 cents per lb	.02
2⅓ oz. cheese @ 6 cents per lb	.01
1 oz. milk sugar @ 8 cents per pound	.005
1-5th oz. phosphates, etc	.005
	$0.04

We obtain a value of milk which corresponds curiously with its *wholesale price* paid to the producer in the vicinity of Philadelphia and New York, and its actual minimum cost of production. The latter may readily be ascertained approximatively by estimating the average annual yield of a good dairy cow

at 2,000 quarts, and the food required at five tons of hay or its equivalent, besides some bran, corn meal, roots, etc., so that the farmer is only selling his hay at $15 per ton when he receives 4 cents per quart for his milk, besides taking all the additional labor, investment of capital, and risk of loss.

I have spoken thus of the pecuniary value, let us now consider its food value. By comparing the statements of Valentin, Lehmann, Bidder and Schmidt, Chossat, Bèclard and Carpenter, as to the amount of food required daily, with the rations of the British and French armies and those of the United States (as will be seen on referring to my article in the *Philadelphia Medical Times*, June 21, 1879), and with the amount of solids as given above, it will be seen that *two quarts* of fresh milk and twelve ounces of bread would be sufficient to maintain a laboring man in full health and strength, the amount of nutritive material being greater than the ration of the French cavalryman. On three quarts milk and twelve ounces bread a man would soon fatten. By comparing the cost of sufficient milk and bread to nourish efficiently a man with that of any other food we shall be struck with its cheapness. But it is not in this that its greatest value lies. It is in the exact adaptation of the various constituents, the fatty, the starchy, the saline, and the nitrogenous, to the wants of the human economy, adaptation both in proportion and kind: so that no other article comes so near to being the universal food of man. Not only does he as all other mammalia depend upon it almost exclusively during the first two years of his existence, but during childhood and adult life milk or its products are essential to our well-being, while for invalids it furnishes the most available and reliable form of nourishment, in many cases the only form. Nor does any mode of preparation enhance its nutritive value. In by far the greater number of instances it is more wholesome and nutritious, more easily digested and more readily absorbed just as it comes from its source than in any other guise. It satisfies the appetite, quenches the thirst, relieves weariness, sustains for the work more surely and quickly than anything else.

Of course its mode of administration and the quantity taken must vary with the age of the individual and the object sought to be attained. We frequently hear from patients the complaint that they do not like milk, and never did, that it never agrees with them, constipates them, etc., etc. Now, in most instances, this is merely prejudice, based sometimes on injudicious mode of taking, or on an inferior article, or on the total absorption of the amount taken, which thus leaves no mass of undigested residue to act (as is the case with food containing woody fiber) on the coat of the bowel as a mechanical irritant. If milk is given in divided doses at intervals of three or four hours, to be sipped slowly, while a little bread is eaten with it, it rarely fails to agree with a healthy stomach or even to restore a debilitated one; if there is any sense of oppression it is a good plan to give one or two teaspoonfuls of liquid rennet with, or immediately after it. While any tendency to constipation may be met by the addition of a little *cream* to the whole milk or the use of a rhubarb pill at night. The benefits of an exclusively milk diet in cases of enfeebled digestion, chronic liver and kidney disease, consumption and impaired nutrition generally, will hardly be believed by those who have not made a thorough trial of it.

Such, then, as briefly as I can give it, is the value of milk from a physiological and medical point of view. No dietary is complete without it or its products, and we all feel keenly its loss when compelled to do without it. But how shall we get it pure and good—so perishable, so prone to change, so apt to absorb impurities, and to be the carrier of the zymotic elements of disease instead of the genial nourishment which vivifies?

In the country, in small towns and villages, we may fairly attribute the health we often see among those subjected otherwise to many privations to the ease with which this great necessary of life is procured. But as cities grow in size, as more second and third parties have to come between the producer and consumer, the difficulty of procuring reliable, nutritious milk increases. Human cupidity comes in, and the bountiful nourishment is robbed of its richness by degrees; water is added, cream is abstracted, and what is sold to the mother for her hungering babe is but the ghost of its former self. Some years ago, in the Campo Santo, at Munich, I walked through the halls where are laid the corpses of those awaiting interment. That day there were over thirty, and all but two or three were those of children. I asked my guide if any epidemic was raging. He looked surprised, and said "No." When asked how there came to be such an excessive proportion of young children, he shrugged his shoulders and said, "Many are the children of poor seamstresses and store girls, They have little to eat themselves, and nothing to give their children; the latter are starved and die, often much to their parents' relief." As I looked at the poor, pale, pinched cheeks and wasted bodies, and thought of the effects of cholera infantum, diarrhœa, tubercular enteritis, etc., which play such sad havoc among our children in large cities, the thought occurred to me, how much of all this is the result of the miserable trash with which we delude ourselves and the poor little innocents committed to our care, calling it milk forsooth! Bad air has its victims by thousands; bad food by its tens of thousands. In New York City alone, as I am informed by Dr. H. A. Pooler, the number of deaths among children under five years of age was reduced 3,673 in last year below that of 1882, in consequence, as he believes, of the improvement effected there already in their milk supply, the adulterations having been lessened to the extent of 100,000 quarts daily.

Various methods have been devised in the effort to remedy this supply of adulterated milk. Systems of inspection under governmental authority have been largely resorted to, and with excellent effect; they should be increased and made more stringent. But they are cumbersome and expensive, and too often fail to protect the very classes that need it most. The Aylesbury Dairy Company in London has a most efficient and extensive system of inspection and de-

livery, but this must increase the cost to the consumer. In Paris a Mr. D'Arcy has successfully introduced the method of supply in glass bottles; and in New York Mr. F. Ratchford Starr has done the same; while in Boston Mr. Burnett and others I believe, are largely engaged in distributing milk by the same method. I have also been doing so in Philadelphia since 1878, and my example there was followed by a number of others, so that I feel justified by the results of experience in urging the members of our profession and others who are interested in the welfare and health of the community to endeavor to extend the use of milk shipped in glass jars.

The method which I have adopted, for which the Agricultural Society of Pennsylvania awarded me an honorable diploma in 1879, is as follows:

The cows are well fed, and kept clean, before being milked the udders should be thoroughly freed from dirt. The milk when drawn is strained into a large can in which is suspended a smaller one filled with ice and salt, so as to cool it as rapidly as possible. It is then thoroughly stirred, so as to equalize the distribution of cream; and from a faucet at the bottom of the large can the milk is drawn into quart jars, each of which is then closed and sealed with a label bearing the name and address of the producer and the date of shipment; twenty jars are then packed in a box and sent to the city. The empty jars of the previous day are returned, cleansed, and prepared for shipment again.

The advantages of this method over the usual one among us in large cans are:

1. The milk must be clean; any dirt would show at the bottom of the jar.

2. It is free from contamination by foul air, etc.; in transit, as the jars are heametically sealed.

3. Each customer gets an exact quart, as the jars must be *filled* to prevent "churning."

4. Each customer gets his own share of cream, neither more nor less, as it is put up before the cream has a chance to separate.

5. It is for the interest of each producer to send the best article he can, as his reputation—and therefore the price he gets—depends upon the quality of the article which bears his name; and he can guarantee to the consumer, as long as his label is undisturbed, the quality of the article furnished.

And this brings us to the consideration of a most important point. As I have shown, good milk *costs* four cents a quart to produce; but the competition of trade often drives the wholesale price down to three and a half or three cents. In the eyes of the dealer, and too often of the too close-buying customer, milk is only milk—all milk is alike—and the honest man who sends whole (pure) milk gets no more for it than his neighbor who removes half the cream, or adds a little water "to pay the freight." So long as this is the case in the estimation of the community, so long may they expect to be imposed upon. Just as soon as they recognize the justice and propriety of paying their milk producers in proportion to the quality and value of the article sold, there will be no difficulty in having on our tables in large cities milk just as pure, just as good, just as sweet, nutritious and wholesome, as if taken immediately from the spring house in the country. There is a difference too—and a great difference—in the milk produced by different breeds of cattle. Those commonly known among us may be divided into three groups: the Jersey, or Channel Island; the Devons, or long-horns; and the Durhams, or short-horn. The latter yield abundantly a rather pale blue milk moderately rich in casein, but not in cream or sugar. The Jerseys yield a smaller quantity of milk, rich in yellow cream, but poor in casein and sugar. The Devons, or long-horned red cattle, yield a white milk nearly equal to the Jerseys in cream, and very rich in casein and sugar, and hence having the highest nutritive value. Next to them comes that from grade Jerseys: next, that from good common cows. That from pure Jerseys is deficient in casein, that from pure Durhams is watery.

I have thus, I think, called your attention to a matter of vital importance, and tried to show the way out of the great difficulties which surround the distribution of milk—pure milk—in large cities. The measure of success which has attended this method, and its more and more extensive adoption, lead me to hope that in the not distant future its cleanliness and superiority in every respect will put an end to present milk-can system with all its dirt and liability to fraud and deception.

DISCUSSION.

The paper was attentively listened to, and on its conclusion an interesting discussion was opened by Dr. H. J. Barnes, who said: Personally my experience with the milk supply of Boston has provoked the greatest indignation. It begins as a producer on my father's farm sixteen or eighteen years ago, when we, in common with our neighbors, were in a continued state of irritation by what seemed unfair treatment by the contractors. The violation of agreement as to what they would pay for the milk of a stated season, the sending back of sour milk, usually with the cream taken off, the necessity of holding the milk ourselves when at certain seasons the contractors found they they had engaged more than they could dispose of, were among the causes of trouble, which continue to the present time, judging from the expressions of views at the recent largely attended meeting of producers in Boston, and from the following letter just received from a milk producer:

"The contractors hire the car, and although obliged to carry milk for private parties, yet they generally dictate terms, so it is almost impossible for producers to get at consumers direct. Twenty-seven cents per can of eight and a half quarts, or three and thre-seventeenths cents per quart, is what my neighbors have had thus far this winter. This month one cent more per can, or three and one-fourth cents per quart, while consumers, some of them at least, pay eight, and get extended "topped" milk at that. Producets are compelled to keep a part of their milk at home in order that these cormorants may supply the good people of Boston milk watered and skimmed, with other abominations thrown in. Right glad would the producers be to send their milk direct to the consumers if it were possible, but now it must go through the same old channel."

There is an inevitable variation in the supply and in the demand for milk. The farmers dispose of the milk to contractors who make a price for a certain time and agree to take all that the farmer produces. Often the quantity is much in excess of the demand and the contractor frequently breaks his bargain with the farmers, who then are obliged either to accept a smaller price for the milk or to make butter or cheese in order to utilize the surplus.

The laws of trade ought to regulate this matter, but if a farmer withdraws his dairy, and attempts to make butter, he is met in competition by the manufacturers of oleomargarine, and it does not pay to make honest butter. One of the most objectionable features in our system of supply is the custom of holding the milk in Boston. In many instances milk produced in the morning is taken to the car in the evening and transported to Boston during the night. The next forenoon it is delivered to the distributers, who take it to their barns or sheds, and there put it in the small service cans for delivery the next morning. It is then forty-eight hours old, sixty before the last meal of that day, and seventy-two hours before a fresh supply is obtained. Except with the greatest care milk will not keep in good condition this length of time, and I am informed by men engaged in the business that it is common to use chemicals for the purpose of preserving it. The advantages of holding it this length of time accrue wholly to the milkman, for it gives time for "topping," so called, which means the rising of cream, rendering its easy separation from the milk possible, and how often this condition of the milk is taken advantage of we are informed by the analyses of the State Board. It had become a "recognized industry" among the milkmen. The milk should be delivered to the consumer on the day of its arrival in Boston.

As a consumer in Boston my experience has not been less exasperating. During the first few years of my practice I endeavored to employ cow's milk as a substitute for mother's milk, but always with indifferent success or failure, which necessitated its final abandonment. Subsequently the paper of Dr. Lynde, read before the State Society, prompted me to try its use once more, and this time on my infant daughter. It soon provoked a diarrhœa, and after floundering about with the trial of a number of artificially prepared foods, condenced milk agreed with her, and this was used until going into the country, where I obtained a supply of pure cow's milk, upon which she continued to thrive. Returning to Boston I engaged milk of a friend (?), who said he would give me pure milk, but the child soon showed the effects of the change in the quantity of water eliminated. It was impossible to keep her otherwise than in a constant state of irrigation, but not until a diarrhœa ensued, followed by an intestinal catarrh, was the milk abandoned, and then only to be tried several times during the winter, again, each time provoking disturbance of the digestive organs. Setting the milk revealed the fact that it was regularly and systematically robbed of the cream. The following summer my child took cow's milk in the country, and did well. The next fall I made another change, after a long conversation with the new milkman, the substance of which was that I wanted "straight milk," as the life of my infant depended upon it. This he engaged to furnish, but, if possible, it was poorer than any I had ever before had. Although of the color of Jersey milk it had scarcely a trace of cream, and I went to the office of the city milk inspector to see what I could do about it. I was there informed that much of the complaint of adulterated milk was groundless, but if I wished to prosecute I should have the assistance of his office, but that "the department labored under great embarrassments for the want of a horse." I did not see fit to involve myself in litigation, and wrote to the milkman never to show himself on my premises again except to obtain a settlement of accounts, but up to this day he has never sent a bill. I then engaged milk which, I am happy to say, is of satisfactory quality, and my baby is doing exceedingly well with its use.

I trust and hope the influence of this Society will be exerted in support of the State Board in prosecuting these ungodly men, who by their wickedness compromise the health and lives of our little ones, an expression you will not think too severe when you remember that of the samples of milk analyzed by the Board in Boston ninety per cent. were found to be adulterated.

In regard to putting the milk in glass jars, I am informed by Mr. Burnett that after a trial of one year he found it impracticable. The breakage amounted to a loss of $150 per month in a supply of 400 quarts a day. He now uses large steel cans holding 60 gallons, and is enabled by their use to deliver the milk to consumers but twenty-four hours old, and this is certainly an advantge, and would be a great improvement in the system of distribution of railroad milk.

A gentleman doing business in the way of supplying milk to the consumers in Boston, and a member of the Milk Producers' Association, who was present at the meeting by invitation of the Secretary, spoke as follows:

This question naturally divides itself into three distinct parts—the production, the transportation, and the city delivery. Let us first look at the subject from the standpoint of the producer. He may be a wealthy man, perhaps living in or doing business in the city. He owns a farm for the fun of it, and because he must have a way of providing a summer residence for his family. He buys first-class stock, hires men to do the work, makes a large quantity of milk, which is very likely not to be of a superior quality, for the reason that all means possible are taken to produce a large flow of milk, and from the lack of personal supervision of the men who do the work. This is the class of men who are agitating all kinds of innovations, putting fancy names on their farms, and a team in Boston to sell their supply, which they add to, if necessary, by purchases from neighboring farmers. It is possible for them to find ways of disposing of it to personal friends in the city, and to others who are led by judicious advertising or the desire to see a new thing succeed. That these methods are not business-like is proved by the fact that there is hardly one genuine success in the large num-

ber who have at various times attempted it; and no opposition is feared so little by the trade as that from a farmer who undertakes to sell his own supply.

Next, we find a large class of farmers who are not rich men, who are farmers because they must be; they may own their farms and stock clear, and may have business talent enough to read the papers, buy their grain at the right time, and dispose of their products to the best advantage. Milk being by far the most desirable of these products, they naturally make all other interests subservient to it. Such men have from eight to twenty cans per day, give their personal attention to it, take pride in their reputation, and are a reliable source of supply. As such they are in great demand, not only among the contractors, but the milkmen themselves, who maintain a jealous watch lest some one more favored by the contractor shall get what they esteem to be their best dairies.

A very general impression has gained ground from misrepresentation and ignorance that the farmer is the victim of an immense monopoly from which he has no escape. Nothing can be further from the truth. Imagine one man, as described, with 8 or 20 cans of 8½ quarts each to sell. He can hardly be so located within 30 miles of Boston that he cannot choose to which of two or three contractors he will sell his milk, to say nothing of butter makers and creameries. If he is so near the car that he can deliver it himself so much the better for him; if he is not, a team belonging to some contractor will either pass his house, if on the main road, or if not he can carry his milk out to the corner of the main road, where it will be taken up as the collector passes. He receives a certain price for his milk delivered at the car, and the rates vary from one to two, or in some cases two and a half, cents per can for the carting, the collector being able to do the work for the minimum rate because he goes loaded, few farmers preferring to hitch up and drive 3 or 4 miles for 16 to 40 cents. If, for any reason, one farmer desires to be independent of the contractor, he can, as many do, make butter, or if he does not wish to do that, he can come to Boston and find a milkman who wishes also to be independent, and they having traded, notify the contractor, who is compelled by law to freight the milk, the price being regulated by the Railroad Commissioners.

A third class of farmers are those who keep only one or two cows, and make a small quantity of milk, who never become an important factor in the problem. All these various producers raise fruits, vegetables, grain, and hay, and expect, if they sell them, to be subject to the law of supply and demand, and to be able to receive only so much as is the ruling price on the day the sale is made; but when we look at the milk question we find a very different state of affairs. Our farmers appoint a meeting of a committee from their number who consult on the price to be established for six months from April 1 and October 1, or from October 1 to April 1, as the case may be. The stipulations are that the contractor shall take all the milk produced for six months at a price which he is expected to name in advance, and pay for the same by the 15th or 20th of the month succeeding the delivery. He using his best judgment establishes such a price, and agrees that it shall not be changed except with the consent of the above named committee. When all the facts are considered it is not to be wondered at that mistakes are sometimes made. Has he a remedy? Let us see. The summer of 1882 was very hot and dry in August and the first of September. The price was arranged on a basis of 43 cents per can at the cars in Boston. From September 20 to October 20 it rained a little every day almost, the fall feed was a marvel, the cows gave more milk than in June, and seventy per cent. of the milk that came to Boston was enough to supply the entire demand. The farmees added all the new-milk cows to their herds that could be bought, sold all their calves, and literally flooded the market. January 1, after three months of ruinous business, the price was lowered three cents per can, trade was stimulated somewhat, and the supply was not in such a tremendous excess of the demand; but the six months' business was a disastrous one, owing to the mistake. On the other hand, if butter had been high and grain high, and the fall as dry as the fall of 1883, the farmers would have felt perfectly justified in selling their cows if they wished, or keeping the calves to use the milk, or making butter, and the last thing in the world that would have troubled them would have been whether the people in Boston were supplied with milk or not. The short-sighted policy of the farmers in such respects, more than anything else, prevents the relations existing between them and their customers being as amicable as might be desired.

How to get cans enough to take all the milk he chooses to produce is the one great trouble every farmer has. The contractor tries to have every milkman furnish cans to take the milk from certain dairies, but has those of his own to send to supply any deficiency. These cans go up on the car dirty, and are left by the collector free of charge; are all of a size, eight and one half quarts wine measure. The farmer, having washed them, strains his milk into them, and puts them into the place he has arranged for cooling the milk. In many cases this is a covered tub or trough near the well, or connected with running water from a spring. The contractor or milkman to whom he sells his milk frequently suggests and often helps to pay for this arrangement, which is of vital importance, as upon the care of the milk for twenty minutes after being drawn from the cow depends the value of it as an article of commerce.

How long milk may be preserved by good care and still be as good as fresh milk is a question upon which I would prefer the opinion of scientific men to my own. Certainly experience teaches that it is more desirable to most consumers (if they do not know of the fact) after twenty-four or even forty-eight hours. There is no trouble whatever in keeping it sweet three or four days, if a temperature of 50° F. is steadily maintained, but my experience also teaches that the baker must have as fresh milk as can be obtained if he wants to make a custard of it and get good results. A better cheese can be

made from new milk than it is possible to make from that over twenty-four hours old.

The farmers, at their meetings and through the press, are frequently influenced by impractical men, who do not make milk, but who want to seem interested in their welfare, to do away with all middle men, and come directly in contact with the consumer. As before intimated, this has been done in isolated cases, but not yet successfully. Surely if practical men, of years of experience in the business, actuated by every feeling of rivalry and ambition, can see no way to improve the present plan, it is an indication that none can be found.

Let us now look at the second branch of our subject, transportation. Here enters upon the scene the much-berated milk contractor. This system has been the growth of years of experience, and many men have made financial shipwreck in the attempt to fill the position. With the plans and failures of the past we need have nothing to do, suffice it to say the only chance for any profit as it is now arranged is by saving a little here and a little there, by doing a large amount of work for a very small commission, and utilizing the surplus milk so as to make the smallest possible loss. The prices paid in the country as well as those obtained in the city are published, and the commission, about eight cents per can, or one cent per quart, is known to the farmer as well as to the milkman. The Railroad Commissioners, after thoroughly going over the matter, have allowed the contractors to charge six cents per can freight for milk brought thirty miles, which is a very close approximation to the actual cost. Out of this he has to pay freight to the railroad, buy ice to ice the milk in summer, and coal to heat the cars in winter, hire men to load the cars and deliver the milk upon its arrival in Boston, and guarantee it from accident or loss. If he buys and sells the milk he has two cents per can over the six for freight to protect him from loss in the transaction of his business and the surplus milk. As intimated before, he makes a one-sided contract by which he agrees with the farmer to take a large quantity if it is for the farmer's interest to make it, and to get along with a small quantity if the farmer thinks it is not in his interest to make it. On the other hand, he contracts with the milkman to give him just what he wants whether the farmer make it or not. In order to be safe he perforce buys all the milk on a large territory, preferring to manufacture a large surplus into butter to saying to his customers: "I cannot supply you, and you must look elsewhere."

The leading principle with too many of the men engaged in the sale of milk in the city is to get trade, by any means possible, and build up a route to sell out. Such dealers have no pride in learning thoroughly the proper way to carry on the business; they do not care much what they sell, or whether or not they make a legitimate profit, if in the end they can sell out and come out even or a little ahead. The class of men who have the better portion of the trade, who have had experience in business, and money with which to carry it on, who want to sell a good article and make a fair profit, and who, if there were no ruinous competition, would not, from principle, take advantage of their customers, but would give every attention to their wants, only asking a fair return, are constantly harassed and annoyed, and, as they term it, robbed by these so-called "pick ups."

Another trouble is found in the competition from stores. At the present price, 40 cents per can at the car, a milkman pays 4.71 cents per quart for his milk. It is conceded that a milk-wagon cannot be run for less than 2 cents per quart by all having any knowledge at all of the business, and many close observers say 2½. If we take the lowest figure, the milk costs 6.71 cents at the consumer's door, or 7.21 cents if we take the higher. It is easy to imagine the feelings with which he would regard a card in a window, "Pure milk, 4 cents per quart," when he may have one or more customers in the same block from whom he must get 7, and, if possible, 8 cents per quart, or not pay his bills.

That it would be an advantage to the business if the Board of Health would drive all store-keepers out of the business who are not willing to sell pure milk and sustain the price, is clear. Whether the poor people who buy would be benefited by the advance in quality more than they would feel the advance in price, is not so clear. At all events, it is a fact beyond dispute that any man may, by a little inquiry, find out the character of the man from whom he proposes to buy, and need fear being cheated no more than he would in buying any other class of goods.

In reply to a question, the same gentleman stated that the effect of feeding cows on ensilage was to produce a peculiar sweetish taste in the milk, which is not at all agreeable, and is also contained in the butter made from such milk.

In regard to the statement that a certain milk-producer is putting up milk at his farm in glass jars for delivery in Boston, the facts are as follows: I know the gentleman, and know the source of his milk. It is transported to Boston by rail, and always comes in ordinary tin milk cans. If he delivers it in Boston in glass jars, it is put into jars after it reaches the city. It comes to Boston like all the rest of the milk.

Dr. J. Ayer asked the speaker, "Ought the citizens of Boston to receive milk as good as farmers produce it, thirty miles in the country; or does the carriage, by cars or otherwise, injure its properties?" to which the reply was given that there is no reason why the milk when delivered at the door of the consumer should not be in every way equally as good as when it left the farm on which it was produced. The main source from which damage might be apprehended would be from too early collection, before the temperature of the milk had been sufficiently lowered by cooling in water, or too high a temperature in transit in summer, or freezing in winter. These accidents are obviated by the cans being surrounded by ice as soon as they are placed in the car, or otherwise kept at the right temperature, which should, if possible, be maintained at 50° F.

(*Continued next week.*)

STATE MEDICINE.

The sixth annual meeting of the Sanitary Council of the Mississippi valley was held at Memphis, March 21, 1884.

The only paper or document of importance presented to the meeting was the annual report of the Secretary, Dr. J. H. Rauch, of Springfield, Ill. We give it as follows:

At the last meeting of the Sanitary Council of the Mississippi Valley, at Jackson, Miss., April 3 and 4, 1883, the following resolutions were adopted:

Resolved, That in case the National Board of Health is deprived of making inspections of persons and freight when demanded by the local boards of health, certificates issued under the supervision of a representative or representatives of the Sanitary Council of the Mississippi Valley, shall be accepted as valid by the boards of health of the Mississippi Valley, provided that said inspections be carried on under the rules and regulations heretofore prescribed by the National Board of Health.

Resolved, That the Sanitary Council recommends that the States of the valley make voluntary contributions to be expended under the direction of the Executive Committee of the Council, to continue river and rail inspections, in the event that no funds are placed in the hands of the National Board of Health for that purpose.

Having received notice from the Secretary of the National Board of Health that that body would be unable to continue inspections after June 30, a meeting of the Executive Committee was held at Memphis, on the 21st of June, at which the following proceedings were had:

At a meeting of the Executive Committee of the Sanitary Council of the Mississippi Valley, held at Memphis on the 21st day of June, 1883, the following members were in attendance; Dr. Wirt Johnson, of Mississippi, President; David P. Hadden, of Memphis, Vice-President; Dr. John H. Rauch, of Illinois, Secretary; Dr. G. B. Thornton, President of the Memphis Board of Health and member of the Tennessee State Board, was also present by invitation. After thoroughly canvassing the situation, which up to this date was considered altogether encouraging, the following preamble and resolutions were adopted:

WHEREAS, The inspection service now conducted by the National Board of Health in the Mississippi Valley will cease on the 30th day of June, on account of want of funds for its further maintenance; and, whereas, the commercial welfare no less thau the health interest of the valley demands that these precautions be continued during the summer months, therefore, be it

Resolved, That the supervision of this service from and after June 30 be assumed by the Sanitary Concil of the Mississippi Valley, in accordance with the action of the Council had at its fifth annual meeting, in the city of Jackson, Miss., April 3 and 4, 1883.

Resolved, That the inspection station now maintained by the National Board of Health below Memphis be continued at the expense of the taxing-district government of Memphis.

Resolved, That the Mississippi State Board of Health should establish and maintain an inspection station on the Mississippi river at some point between Vicksburg and the Louisiana State line.

Resolved, That the present corps of inspectors of the National Board of health on duty at the Mississippi river quarantine station below New Orleans and on the river and railroads at New Orleans be continued under the direction of the Executive Committee from and after June 30.

Resolved, That the rules and regulations of the National Board of Health, for the conduct of this inspection service, be, and the same are hereby adopted for its further continuance under the direction of the Sanitary Council.

Resolved, That the supervision of this service, on behalf of the Executive Committee, be assigned to the Secretary of the Council, Dr. John H. Rauch, Springfield, Ill., to whom all reports of inspectors and communications pertaining to the service should be addressed.

It was further agreed that on and after July 1, only the certificates given by the inspectors of the Sanitary Council of the Mississippi Valley would be recognized by the inspection stations along the river, and by the health authorities of the towns and cities in those States which are members of the council.

The meeting adjourned subject to the call of the Secretary, who ot once proceeded to New Orleans for the purpose of personally arranging the details of the service at that important point.

On July 1, 1883, in pursuance of the action above recited, the Sanitary Council of the Mississippi Valley assumed supervision of the river inspection service, which was thenceforth continued uninterruptedly under such supervision up to September 15, when, all danger of yellow fever infection having passed, it was discontinued for the season.

During this period an inspector was maintained at the Mississippi river quarantine station below New Orleans, and two rail and two river inspectors at the port of New Orleans. In addition to these Mississippi maintained a station at Fort Adams, and Memphis, one on President's Island. In the operation of the service the rules and regulations of the National Board of Health were continued, no changes being made either in the *personnel* of the service or in its policy, by the Council, after assuming supervision. The inspector at the quarantine station below New Orleans was relieved from duty on July 31, owing to the action of Gov. McEnery, as hereinafter detailed.

At the request of the Executive Committee the expenses of the maintenance of the service, under the supervision oft he Council, were defrayed directly by those interested, so that the Council was relieved of the responsibility and labor attaching to the disbursement of money. Mississippi, through its State Board of Health, and the taxing district of Shelby County, through the Memphis Board of Health, paid the expenses of the stations at Fort Adams and President's Island respectively. The Illinois Central and Louisville and Nashville railroads paid their own inspectors

in New Orleans; while the river inspectors in New Orleans were paid by the commercial and steamboat interests through the New Orleans Auxiliary Sanitary Association.

No officer or member of the Sanitary Council received any compensation for his services in connection with this work.

From May 15, the beginning of the quarantine season, up to the close of July, there had arrived at the Mississippi river quarantine station, below New Orleans, seventy-three vessels from foreign ports. Of these, forty-seven were inspected up to June 30, under the supervision of the National Board of Health, and during July the remaining twenty-six were inspected under the supervision of the Sanitary Council.

Of these latter, eleven were from ports infected by yellow fever at the date of departure, and three of them—namely, the Berna, July 8, the Merchant, July 16, and the Buteshire, July 17, arrived with cases of yellow fever on board. Among the remaining vessels one was found to have had yellow fever on board in Havana last season, and in seven other cases it was probable that they had been infected at some previous time.

The sanitary condition of the vessel, cargo, crew, and passengers in twelve cases was good, and in the remaining cases, with the exception of the Berna, Merchant, and Buteshire, which were infected—the report of the inspector was qualified. In all cases the vessels were subjected by the quarantine authorities to a thorough general cleansing, purification of bilge, hold, etc., and disinfection with carbolic acid and copperas, and the cargoes were fumigated with sulphurous acid gas. Coffee ships from Rio de Janeiro were either not allowed to proceed up to New Orleans at all, or only after removal of cargo and thorough fumigation of the same.

The arrival of the Merchant July 16, and of the Buteshire the following day, both from Vera Cruz, with yellow fever cases, led the Governor of Louisiana, July 20, to recommend to the Louisiana State Board of Health that no infected vessel be permitted to enter the Mississippi River, and that all infected vessels then at the quarantine station be removed out of the river at once, assigning the reason that their presence at that point had practically rendered the station an infected port in dangerous proximity to New Orleans, and threatened a stupendous calamity to the Mississippi Valley.

At its meeting July 23, the board discussed this communication, and finally adopted a resolution requesting the Governor to issue a proclamation enforcing his recommendations, and declaring non-intercourse between Louisiana and Vera Cruz, Rio de Janeiro, Havana, and other infected ports, which proclamation was made the following day, July 24. The infected vessels were ordered to be removed from the river, and for the first time in a number of years the lower Mississippi was freed from the menace arising from the admission of yellow fever ships to the river.

Immediately upon receipt of information of this action, the request previously preferred to Governor McEnery, to permit the Sanitary Council Inspector to remain at the quarantine station, was withdrawn by telegram, and the inspector was relieved from duty July 31.

In this connection it is proper to remark, that while both the National Board of Health and the Sanitary Council have been advocating for the last four years the exclusion of infected vessels from the Mississippi during the dangerous season, and the use of Ship Island as a refuge station for such vessels, the necessity for absolute non-intercourse has not been recognized. The plan proposed by these two bodies contemplated the maintenance of an inspection station at or near Port Eads. All vessels entering the river would here be subjected to a rigid examination. Those found to be infected would be compelled to go to the Ship Island refuge station; healthy vessels from infected ports would be subjected to such treatment as would render it safe to allow them access to New Orleans; while all others, if found in a good sanitary condition, would be passed without detention. In this way it was believed the public health could be properly protected without inflicting any serious injury to the commercial interests of New Orleans.

On August 13, immediately after my return to Springfield from New Orleans, I recommended that, "unless yellow fever should appear in that city by the 20th instant, inspections should cease on the 31st." Doubts as to the character of the Jackson, Miss., sickness, and the conditions at Pensacola and vicinity, prevented the adoption of this suggestion; but on the 15th of September, New Orleans and the valley remaining free from any suspicious illness, the service was definitely suspended for the season.

From May 15 to September 15, during which period the service was maintained, there were inspected 73 ocean vessels at the Mississippi river quarantine station; 277 steamboats and other craft at the port of New Orleans; 439 steamboats and other craft at the stations of Fort Adams, Miss., and President's Island, Tenn., and 1,421 freight trains on the Illinois Central and Louisville and Nashville railroads at New Orleans. The aggregate inspections comprise 2,210 ocean vessels, river craft, and freight trains, with a capacity of 2,534,870 tons, and carying 39,947 officers, crew and passengers.

Not for many years has New Orleans been so free from alarm or cause of alarm, during the corresponding months, as during the sixty days ending August 31 last, and there was practically no trouble with regard to the yellow fever during the summer in any portion of the region in which the Sanitary Council is directly interested.

In conclusion, it seems proper to add that the utility of the Council has been again demonstrated—this time in the direction of practical administration over a large area, embracing many and diverse interests, and coördinating and utilizing agencies and authorities which, otherwise, would have been limited in their usefulness to their own individual fields. The methods of inspection and sanitary supervision were uniform along thousands of miles of rail and river; and all conflict of authority, all clashing of boards, and all expense and irritation of ill-advised and un-

necessary quarantine, and hence all embarrassment and interruption of travel and traffic were successfully and happily avoided.

There is no question in my mind but that the form of the organization should be maintained in readiness for instant action whenever an emergency arises similar to that with which we were confronted during the summer of 1883.

The minutes of the last annual meeting, that at Jackson, Miss., April 3 and 4, 1883, have been published in full, and copies supplied to the delegates; so that, unless called for, there is no necessity for reading these at this time.

After the reading of the Secretary's report a series of resolutions were reported by the committee on that subject, which elicited much discussion, and were finally laid upon the table.

Dr. Hyer then offered the two following resolutions, which were adopted:

Resolved, That the Sanitary Council of the Mississippi Valley, in annual session assembled, memorialize Congress to adopt the bill introduced into the House of Representatives Jan. 8, 1884, by the Hon. Casey Young, providing for the prevention and introduction of infectious diseases into the United States, and for obtaining information of the sanitary condition of foreign ports and places in the United States, and for procuring information relating to climatic and other conditions affecting the public health.

Resolved, That the thanks of the Council be, and the same are, hereby tendered to Dr. Rauch, the Secretary of the Council, for his arduous and faithful labors under the instructions of this Council in 1883, and the Executive Committee are hereby instructed, if necessary, to adopt the same line of action in regard to the prevention of the introduction of yellow fever or other infectious diseases into the Mississippi Valley during the year 1884.

After the adoption of these resolutions and the transaction of some miscellaneous business, the Sanitary Council adjourned. The officers elected for the ensuing year were mentioned in the preceding number of the JOURNAL.

It was ascertained that the Executive Committee would decide to call the next meeting of the Council at New Orleans, some time before the close of the Cotton Exposition.

During the evening a number of the delegates were entertained by Drs. Thornton, Saunders and Marshfield, in being honored at the "Tennessee Club," or in partaking of hospitalities at their residences.

Most of the delegation from Illinois prolonged their visit another day in the city "built on the Chickasaw bluff," and then proceeded to New Orleans.

The system of "automatic sewage" was investigated and extolled. It will be one of the means, no doubt, of preventing yellow fever from ever getting much headway in their city in the future.

Thirty delegates were present at the meeting, representing eight States.

FOREIGN CORRESPONDENCE.

PARIS LETTER.

PARIS, MARCH 14, 1884.

A short time ago, Professor Germain Sèe read a very interesting paper at the Academy of Medicine on the diagnosis of pulmonary phthisis, in its various forms, which he has since published separately. It may be questioned as to whether there exist or not any cases of consumption without bacilli, or even without the classical tubercles; but the class of phthises without bacilli are, according to Professor Sée the only true phthises. The learned professor, true to his doctrine of the pathological unity of phthisis, declares that there is but one phthisis—phthisis tuberculosi, of which, it is true, the forms are varied. These are: 1. The so-called miliary granulation which is found in the lungs of phthisical patients, and often generalized in all the organs and in all the tissues. 2. The tubercle, properly so-called, grey or yellow, which follows the granulation. 3, The substance infiltrated with grey or yellow matter, which results from the fusion of isolated tubercles. 4. In all the cases of tubercles, whether distinct or confluent, more or less advanced, the caseous condition, which constitutes the first phasis of destruction of the morbid product.

This doctrine of the pathological unity of phthisis has been confirmed by experiment, as all the products inoculated reproduce the same phthisis, variable in its forms, but identical in its basis, always and indefinitely inoculable. Between specificity and virulence, there is but one step: this has been passed. The transmissibility is real; it was only necessary to search for the agent of contagion, and as the smallest quantity of morbid matter inoculated, produces the malady, it is not with an ordinary poison we have to deal, but most probably with a microbe, which Professor Koch, of Berlin, demonstrated in April, 1882. Although other experimenters believed they had discovered the microbe of tuberculosis, Koch was the first who, by a special process of coloring, succeeded in discovering the true microbe under the form of rods, which, by their chemical and morphological properties, differ totally from all the other known forms of parasites. He gave three series of decisive demonstrations: 1. The constant presence of bacilli in all the tubercles and liquids secreted; in miliary granulation, raw tubercle, parietes of cavities and their contents, which keep up the sputa, scrofulous products, lupus (Cornil) and all the products derived from the evolution of spontaneous tuberculosis in animals, have furnished bacilli. 2. The speciality of the chemical and morphological characters of bacilli. 3. Specific characters, that is to say, the virulence of bacilli and their exclusive property of reproducing tuberculosis. Koch cultivated these bacilli in the serum of bullock's blood, by a particular process which was imitated by Baumgarten, who found that whenever he inoculated with the products experimented with, tuberculosis was always engen-

dered. On the other hand, the morbid products, minus bacilli, never engendered the disease.

From these premises Prof. Sée concludes that bacillary expectoration is the sign characteristic (*la signature*) of tuberculosis; the sputa without bacilli belong to other maladies, whence the conclusion that the sputa are contagious, and that it is the pulmonary exhalation which propagates the disease. Of 2,509 cases of phthisis collected from reports from different parts of the globe, bacilli were found in the sputa of 2,417 cases, and in the greater part of the negative cases, it is acknowledged that the experiments were not sufficiently repeated to permit one to affirm the absence of the parasite. On the other hand, whenever the experiments gave negative results the autopsy showed the absence of tubercles.

From these considerations Prof. Sée has thought proper to admit three other forms of phthisis, which he terms pseudo-phthises, which are difficult or impossible to diagnose from true phthisis without examining the sputa as practised by Koch and others after him. These are: 1. Latent phthises, which commence insidiously and continue for a long time without manifesting any physical signs, by a short hacking cough, with or without emaciation. The examination of the products of expectoration often permits one, from the commencement of the malady, to recognize the origin of this cough. In cases of spitting of blood also the origin of which it is impossible to discover by auscultation, the examination of the products of expectoration would often enable one to pronounce an absolute opinion from the first attacks, as to the nature of the hæmorrhage. In this same group will be found hyperacute phthisis, termed miliary, the diagnosis of which is generally impracticable unless the expectoration is examined. In the latter case the presence or absence of bacilli would decide the question. 2. Abnormal phthises, or as Professor Sée terms them, "phthisies larvees" are those in which the phthisis sets in suddenly and assumes the appearance of the acute affections of the respiratory organs, such for instance, acute pneumonia, and is treated as such. It may also be mistaken for acute bronchitis, accidental laryngitis, or simple plenrisy. The error may be said to be inevitable without the microscopic examination of the products of expectoration. 2. A third category comprises broncho-pulmonary affections, which in their turn have also so simulated phthisis, even as regards the auscultatory signs of the latter, as to leave the physician and patient in the greatest uncertainty. Among these pseudo-phthises may be included pulmonary syphilis which differs from tuberculosis by its incurability. M. Sée referred also to bronchial dilatation in which, in spite of appearances, the examination of the sputa enabled the physician to diagnose absence of cavities. In fine, the same remarks may be applied to all pulmonary affections, in which the examination of the sputa can alone remove the difficulty of diagnosis: the absence duly established of parasites in the sputa, would constitute with certainty the absence of tuberculosis. Inversely, the presence of bacilli would enable the physician to recognize the existence of tuberculosis even where the latter had never been suspected.

The consequences of this discovery must lead to another system of therapeusis in the treatment of this dire affection, the object of which must be to attack the parasite at the commencement of its evolution, but as yet nothing has succeeded. A. B.

DOMESTIC CORRESPONDENCE.

LEGAL REGULATION OF THE PRACTICE OF MEDICINE.

EDITOR JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION.

In 1849, at the Boston meeting of the American Medical Association, that body had a report from an able committee on the subject, among other things, of regulating the practice of medicine by law, the conclusion reached being that it was not at that time expedient to seek the aid of State legislatures in that direction, and this has probably been the dominant sentiment of that organization since, as no further agitation of the matter has occurred. But many things have happened in the thirty-five years since that first Boston meeting of the Association, and it is quite probable that the present members of that body may hold views differing from those of the members of that day.

At least, for years thoughtful physicians have been filled with regret to observe so many persons engaged in the practice of medicine, who possessed no adequate professional education for the service. These incompetents consisted of many who had been to medical colleges of some kind, perhaps of more who had never been in a college, medical or other, and of some who had little or no training in any educational institution—natural doctors, so-called.

To devise a remedy for this evil of magnitude has taxed the serious thought of the wisest among regular physicians for more than a generation. The initial step in the foundation of the American Medical Association was taken in 1845 by the New York State Medical Society in these words: "Whereas, it is believed that a national convention would be conducive to the elevation of the standard of medical education in the United States," and the national convocation of physicians has continually through all the years of its existence labored in the same field, and the labor has not been altogether without fruit; but while it has been giving attention to the education of those who were to become members of its own guild, simply cultivating its own ground, new territory has been opened, and other workers have claimed popular recognition and have received it. And while regular physicians may properly lament the existence of the delusion that gives professional standing to the disciples of exclusive dogmas in medicine, they cannot undertake, on behalf of the people, to produce a more competent corps of medical practitioners without a clear recognition of the fact that other schools of medicine than the regular are integers in the sum that

constitutes the whole number of medical persons who minister to the ailing with the consent and approbation of the public, so that though the regular fraternity could make perfect its own adherents so far as knowledge has advanced, there would still be a class, far from insignificant in numbers, that would be outside their jurisdiction and direct influence.

There must, therefore, be some ground selected for further operations, upon which all well-intentioned practitioners can stand and coöperate for a common end. Fortunately, such a platform is not difficult to find, and it consists in a demand that every aspirant for the privileges of a medical practitioner shall furnish satisfactory evidence that, in addition to a suitable general education, he is sufficiently learned in medical history, anatomy, histology, physiology, chemistry, pathology, pathological anatomy, ætiology, semialogy, mechanical surgery, parturient mechanism, hygiene, and medical jurisprudence. So far as it goes, this scheme for the improvement of the profession of the future is not likely to meet with opposition from the best elements, nor a majority, of the members of any school of practice which has enough of professional *elan* to establish and maintain a State organization of its adherents, and reliable testimony is not wanting that there is a rapidly increasing sentiment among reflecting laymen that the time has fully come when all medical practitioners must be educated persons.

That this scheme embraces no therapeutic doctrine will be distasteful to many excellent physicians, but it is believed that the sober second thought of all classes will recognize that there is little risk in trusting the medication of the ailing to the judgment of any one who is completely master of the departments of medical science recited above. And, moreover, it must be an apparent verity to the most obtuse that while regular physicians, eclectics, homœpaths, etc., have their present standing among the people, no one of the schools can reasonably hope to have its peculiar views of therapeutics recognized by an authority that has the power to cause their general adoption to the exclusion of others, while all can heartily say to the scheme of learning herein outlined, so far as it goes, amen.

To have this measure bear fruit it must be prescribed by the State, and have the machinery of law to enforce it. This could probably be obtained by the judicious management of the friends of the measure, because it rests upon general principles so patent that legislators could not torture it into a proposition for the benefit of any class of citizens other than the whole people themselves, nor accuse it of being inimical to any person whose plaints were entitled to respect. My several years' experience as chairman of a committee of the State Medical Society to procure legislation to regulate the practice of medicine, convinced me that any scheme of value for this purpose must have such intrinsic merit as to command the support of the non-medical members of the legislature, irrespective of the advocacy or opposition of the doctors who may be members of that body. In the legislatures I appealed to, about ten per cent. of the members were physicians of various kinds, and no proposition to regulate practice could obtain the active support of more than a fraction of these, and, as a rule, the lay members would claim that the doctors must be a unit for a bill of the kind to entitle it to their consideration, an impossible condition while it covered therapeutics. It is believed that the good in the plan now presented is so obvious that it will receive the approbation of the non-medical legislators on its merits, independently of the views of the doctors present.

So important is it that any good plan adopted to regulate the practice should be uniform in the several States, or if not identical in terms, at least equivalent in substance, that it would seem a proper act for the American Medical Association, at its May meeting in Washington, to formulate the practicable points that the occasion demands and the popular sentiment will warrant, into an orderly proposition, and give it the benefit of a recommendation that the legislature of each State in the Union be urged by the profession within the State, to clothe it with the force of a statutory enactment. It is to call the attention of the members of the Association to the desirableness of unanimity in this premise that this communication is submitted to them at this time.

Some States have already acted in this matter, other States are moving in this behalf—Dr. Gihon, in the JOURNAL of March 22, details what New York is striving for, and in Indiana, Dr. Rowland, as the chairman of a committee of the State Society, is making an active, intelligent canvass for the same purpose—and it is of importance that there be an authoritative model as a common guide, if we hope to approximate a common standard, and there is no organization but the American Medical Association that could legitimately and with propriety exercise the right or appear in the role, of a common adviser.

JAS. F. HIBBERD, M.D.

Richmond, Ind., March 29, 1884.

WASHINGTON LETTER.

MATTERS IN CONGRESS OF MEDICAL INTEREST.—March 3, Mr. Pettibone, of Tennessee, introduced a bill (H. R. 5603) into the House of Representatives which was referred to the Select Committee on the Public Health, and which was in effect: That the Surgeon Generals of the U. S. A., the U. S. Navy, and Supervising Surgeon-General of the U. S. Marine Hospital Service, shall hereafter constitute the United States Board of Health, with the powers and authority now exercised by the National Board of Health. Sec. 2 requires the consular officers to report to the Secretary of State all matters affecting the public health coming under their notice. Sec. 3 orders sanitary investigations to be made at the Museum of Hygiene of the Navy Department, under the direction of the Surg.-Gen. U. S. Navy. Sec. 4 puts the quarantine service under the direction of the Supervising Surgeon General of the Marine Hospital Service. Sec. 5 orders an annual statement of transactions and expenditures of moneys to be made to the Secretary of the Treasury.

The Senate Bill to establish a University of Medicine in the District of Columbia, and referred to in this correspondence on page 193, is already bringing forth some curious fruit. A so-called graduate of the Allopathic and Physio-Medical, or Botanic schools of medicine, uses its text as an excuse for an apparent discussion of the bill and a real advertisement of himself—he would amend by adding the hydropathic and botanic schools, and accordingly issues his circular.

College Matters.—On March 20, the Medical Department of Howard University held its annual Commencement, with a graduating class of 21, of whom 3 were women.

On March 20, the Medical Department of the Columbia University graduated a class of 14. It also conferred the honorary degree of M.D. on Robert Fletcher, M.R.C.S.

NECROLOGY.

Wolcott, Erastus B., M.D., of Milwaukee, was born October 18, 1804, in Benton, Yates county, New York. His parents were from Litchfield, Conn. He was a lineal descendant of Gov. Oliver Wolcott, one of the signers of the Declaration of Independence.

He commenced the study of medicine when about 18 years of age, under the direction of Dr. Joshua Lee, of New York, and received a degree of M.D. from the Medical College of Western New York in 1829. In 1835 he was appointed Assistant Surgeon in the army, and not long after was stationed at Mackinaw. He there married a daughter of Mr. Michael Dousman, and in 1838 resigned his commission and settled in Milwaukee, where he practiced his profession until the time of his death, January, 1880.

The doctor was a prominent member of the early Territorial and State Medical Societies, and a punctual attendant in days when sessions were held in the winter at Madison, and the state of the roads and public conveyances rendered attendance no easy task. He was one of the organizers of the Milwaukee County Medical Society, in 1846, and was present when it reassembled, in 1879, after many years of inaction. He was also one of the originators of the first local medical society of Milwaukee, and became a member of the American Medical Association in 1878. He was not only actively engaged in his profession, but he held many offices of trust and honor in the city and the State. He was made Surgeon General of the State Militia in 1842, and Major General of the First Division of Wisconsin Militia in 1846, a member of the Board of Regents of the State University in 1850, and one of the first Board of Managers of the National Homes for Disabled Soldiers in 1866, which position he retained until his death. At the time he came to Milwaukee he bore a good reputation as a surgeon, which deservedly increased and became more widely spread as the years passed away. He was gifted with great natural qualifications for this work. He possessed keenness and quickness of perception, was a neat and dexterous operator, was prompt in action, fertile in expedient, untiring in care and attention, and always manifested that gentle consideration for the patient which is ever a prominent attribute of the successful surgeon. Until the time of his last illness he was ever ready to respond to any summons from the poor as readily as from the rich, and by night as cheerfully as by day. There are thousands yet living in Wisconsin, in whose hearts the mention of his name will always call up deep feelings of gratitude and affection.

J. K. Bartlett, M.D., Milwaukee.

MISCELLANEOUS.

NEW BOOKS.

Escudié, A. Des hémiplégies dans le diabète sucré. 8vo 39 pp. Paris : Derenne.

Gariel, C. M., et V. Desplats. Eléments de physique médicale. 2e edition. 8vo. xii. 920 pp. avec 535 figs. Paris : Sary. 12f.

Leplichez. De la métrite chez les tuberculeuses. 8vo. 75 pp. Paris: Davy.

Nepveu, G. Présence de bactériens et du cercomonas intestinales dans la sérosité péritonéale de la hérnie étranglée et de l'occlusion intestinale. 8vo. 14 pp. Paris: Derenne.

Ohier, L. Le masque sclérodermique. 8vo. 88 pp. Paris: Pichon.

Riant, A. Hygiène scolaire. Influence de l'ecole sur la santé des enfants. 7e edition. 18mo. xlviii. 399 pp., avec 79 figs. Paris : Hachette et Cie. 3f 50c.

Nussbaum. Künstliche Harnwege. Zwei kleine Mittheilgungen. 8vo. 19 pp. München: Rieger.

Œller, J. N. Zur pathologischen Anatomie der bleilähmung. 8vo. 26 pp. München: Rieger.

Œrtel. Ueb. Ernährung m. Hühnereiern. 8vo. 21 pp. München: Rieger.

Pfeiffer, L. Regeln für die Wochenstube u. Kinderpflege. 2 Theil. 8vo. Weimar: Höhlan.

Official List of Changes in the Stations and Duties of Officers Serving in the Medical Department United States Army, from March 22, 1884, to March 28, 1884.

Hammond, John F., Colonel and Surgeon. now in New York city on sick leave of absence, will, after the expiration of his sick leave, await orders in that city. (Par. 8, S. O. 70, March 26, 1884.)

Gibson, A. J , First Lieutenant and Assistant Surgeon, relieved from duty at Fort Hays, Kan., and ordered to Fort Wingate, N. M., for duty. (Par. 3, S. O. 58, Hdqrs. Dept. Mo., March 18, 1884.)

Edie, Guy L., First Lieutenant and Assistant Surgeon, assigned to duty at Fort McIntosh, Texas.

Robertson, Reuben L., First Lieutenant and Assistant Surgeon, assigned to duty at Fort Ringgold, Texas. (S. O. 33, Par. 3 and 4, Hdqrs. Dept. Texas, March 17, 1884)

Gandy, Charles M., First Lieutenant and Assistant Surgeon, assigned to duty at Fort Brady, Mich., as post surgeon. (Par. 6, S. O. 56, Hdqrs. Dept. of the East, March 22, 1884.)

Crosby, Wm. D , First Lieutenant and Assistant Surgeon, relieved from duty at Fort Huachuca, A. T., and ordered to Fort McDowell, A. T., for duty. (Par. 1, S. O. 20, Hdqrs. Dept. of Arizona, March 15, 1884.)

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ORIGINAL ARTICLES.

HYDRONEPHROSIS.

AN ESSAY BASED UPON THE COMPARATIVE STUDY OF SEVENTY-ONE CASES OF THAT LESION, OF WHICH ONE CASE CAME UNDER THE PERSONAL OBSERVATION OF THE WRITER.

BY GEO. A. STAPLES, M.D.

When the urine accumulates slowly in the kidneys, either because of some obstacle in the ureter or by reason of some malformation of the parts it occasionally happens that the calyces and pelvis renalis become dilated without perceptible inflammation of their walls: urinous or serous fluids collected in such a way, with their consequent lesions, are now known as hydronephrosis.[1]

Since the latter part of the 17th century this affection has been described under different names: first, by Rudolph and Franz, as hydrops renalis, then by Ruysch as expansis renum or hernia renalis, later by Johnson as hydrounal distension, still later by Rayer as hydronephrose.

The old anatomist Ruysch first had his attention called to this lesion through an anomaly observed while dissecting the kidneys of a sheep: so far as I know this is the earliest case on record, and perhaps, historically considered, worth translation from its monkish Latin.

"Nearly two years ago that diligent surgeon and anatomist, Vogelsaugh, at a dissection showed us two kidneys of a sheep so stretched and filled with a watery fluid that each kidney could hold nearly two pints. The ureters were tortuous, and of such capacity that they would admit a large carrot root. Each end of the swollen kidneys had not lost its natural glandular structure, but the space between was composed of membrane. The tubuli pelvis were great sacs of such size that each would admit an acorn stripped of its green cup. By easy manipulation I could force the urine in the bladder toward the ureter and kidneys, but not from the ureter and kidneys to the bladder, except by a strong effort, very sparingly, through a little foramen in the middle of a septum I found between the bladder and ureters. From this cause arose a regurgitation of urine, and in course of time such a large expansion of the kidneys and ureters."[1]

Bonetus (Sepulcretum, Genevæ, 1700) also makes mention of similar cases that were mistaken for hydrovaria; on page 571, Vol. II, he says: "Sometimes not only serum is derived from the kidneys by the emulgents, but even serous and mucous material; when this stays in the pelvis it becomes sandy; when it stays in the emulgent veins, because of its coarseness, a mass is formed shaped like a butterfly, having symmetrical wings and feet." This phenomenon he actually observed at an autopsy made on the Duchess of Ferrara, who appears to have suffered from hydronephrosis. A case of this lesion diagnosed during life as swollen spleen is related in the same volume, as well as probably the first congenital case on record, where the right kidney was enormously swollen, but unaltered in its general conformation.

[2]Rayer was the first writer to give an extended and exhaustive account of this affection; since the publication of his work several writers, Johnson,[3] Vogel,[4] Rosenstein,[5] Roberts,[6] Ebstein,[7] Todd,[8] Lecorché,[9] and especially Simon,[10] in a work that has never been placed before the profession in this country, have added much to our knowledge and treatment of this comparatively rare lesion. Nor in this connection should the writer omit to mention the monographs of such men as Cooper Rose,[11] C. J. Hare,[12] Krause,[13] Hildebrandt,[14] Gusserow,[15] Saexinger,[16] Ackermann,[17]

[1] Centuria anatomico-chirurgicanum Observationum Frederici Ruyschii. Observatæ XCIX.

[2] Maladies des Reins—Tome troiseim, §8a9, par M. P. Rayer.

[3] Treatise on Kidney Diseases. Lond. 1852. [4] On same by Vogel (1865.)

[5] Traitui Pratique des Maladies des Reins, par S. Rosenstein, tratuit par les Docteurs E. Bottentat et F. Labadie-Lagrave.

[6] Urinary and Renal Diseases, by William Roberts, M.D.

[7] Kidney Diseases, by Prof. W. Ebstein in Zeimzsin's Enclyclopædia, Vol. XV.

[8] Todd, Clinical Lectures Page 389.

[9] Lecorchē, Maladies des Reins.

[10] Chirurgie der Nieren. Theil II, von Dr. G. Simon.

[11] *Medical Times*, 1868.

[12] *Medical Times*, 1857, Vol. I.

[13] Langenbeck's Archiv., VII, 6. Ein Fall von Hydronephrose u. s. w., von Dr. W. Krause.

[14] Volkmann's Vorträge, Nr. V. Ueber Retroflexion des Uterus, von Dr. Hildebrandt.

[15] Ibid, Nr. XVIII. Ueber Carcinoma Uteri, von Dr. A. Gusserow.

[16] Vierteljahrschrift für die Praktische Heilkunde (Prag), Nr. XCIII. Ueber Uterus Krankheiten, von Dr. Saexinger.

[17] Deutsches Archiv. für klinische Medicin, Heft III und IV. Atrosie beider Harnleiter u. s. w., von Dr Th. Ackermann.

[14] "Die Hydronephrose enthält im Gegensatze zur Phronephrose nur eine seröse Flüssigkeit, etwa verdünnten Urin, aber kein Eiter." Ultzmann. Real Encyclopädie der Gesammten Heilkunde. Band VI, p. 662.

[1] "On désign sons le nom d'hydronéphrose un état morbide, indépendant d'inflammation," etc. Lecorché—Traité des Maladies des Reins. p. 624.

Hotz,[1] Rosenberger,[2] Labadie-Lagrave,[3] Lanceraux,[4] Fenger[5] and others, that have aided much in the elucidation of this important subject and from which most of this paper has been gleaned.

Hydronephrosis may be either congenital or acquired; of the former variety little need be said here except that it is frequently associated with atresia ani, club-foot, hare-lip, and other malformations, and that where it is double the neonatus is never viable. The ætiology of the latter kind embraces a great variety of causes.

Of such factors may be mentioned calculi or hydatides in the urinary passages, thickening or swelling of the walls of these passages, prolonged or habitual retention of urine in the bladder: these causes, it must be remembered also, are rendered especially operative in females by reason of the anatomical peculiarities of their pelvic organs.

This interesting point is thus ably discussed by Prof. Hildebrandt,[6] whose remarks, with account of cases, I translate: "The connection of an hydronephrosis with a primary disorder will appear clearly if we consider the anatomical seat of the ureters. The ureters take a course on the right and left side next to the portio supra-vaginalis uteri. If now the middle portion of the uterus is angularly bent it is easily seen that both ureters will bend with it and will be pulled down from behind. Then the urine necessarily stagnates on its way to the bladder above the bend; it distends the ureter and the stagnation continues yet farther up to the basin of the kidney. . . . This connection between retroflexion and distension of the ureters was shown even more clearly in a case sent to me from B—— a few months ago.

Mrs. H——, besides the ordinary symptoms of retroflexion, suffered from tormenting pain in micturition and was sent to be examined because of a large soft tumor above the left Poupart's ligament. I found retroflexion and gave as a diagnosis a swelling caused by distension of the ureter in consequence of the retroflexion. I could easily at the same time verify my diagnosis. As I introduced the catheter after straightening the uterus with the sound, and emptied the urine with the aid of outside pressure on the abdominal walls, the tumor, at first as large as a child's head, shrunk to the size of an apple. A diagnosis will be very much more difficult at the inception of the disease, when the ureter is but little distended and the kidney is yet sound.

Case II. Miss F,, a robust girl, in her 17th year, complained of deep-seated pelvic pain with whites, backache, and too free menses with severe molimen. Numerous nervous pains, a tormenting desire to urinate, a feeling of fullness as if the bladder were overdistended, and of spasmodic constriction in its neighborhood, also troubled her, at these times a small quantity of urine would be evacuated without relief. I found a very relaxed uterus, angularly pointed, retroflexed for more than one inch, which easily could be raised by the sound. A soft swelling on the left side somewhat above Poupart's ligament had been observed by the physician who sent the patient to me.

With the most careful examination, while the patient was lying on her back, I could not find this tumor, but when I examined her in the upright posture, I found to the left of and somewhat above the uterus, a swelling, which, when examined by conjoined manipulation, appeared of an oblong form and was somewhat tender, but at different examinations varied in size, shape, softness and resiliency. As the flexion improved the swelling disappeared permanently, and with it the difficulty in urination. I therefore inferred that in this case, also, there was distension of the ureters. Especially characteristic were the subjective troubles of the patient, the change of form and circumference of the tumor when in a fixed position; its disappearance in the recumbent posture, which evidently was caused by the distribution of the fluid along the distended ureter to the kidney; and, on the other hand, its appearance in the upright posture, in which the urine sank down upon the bent angle—symptoms that are pathognomonic of this rare form of urinary disorder.

Prof. Saexinger[1] mentions in these words a cause of the lesion in women: "Many women who suffer from carcinoma uteri die from uraemia because of the complete involvement of the ureters, or degeneration of their outlets, or obliteration of their lumen by large pieces of débris or proliferated masses. The result is a spiral-shaped ureter, that often is as large as a finger, dilatation of the kidneys, pelvis and calyces, atrophy of the renal paenchyma, hydronephrosis."

Dr. A. Gusserow,[2] in an essay upon the same subject, makes these remarks: "The involving of the uropoetic apparatus independently of the bladder in this disease (carcinoma uteri) is of importance. Very frequently one or both ureters are involved, resulting in a destruction of the renal function. Blau found that in 93 cases distension of one or both ureters occurred 57 times. Stenosis or total closure of the ureters rarely happens, because of a cancerous affection in them: ordinarily it is because of pressure on them at their entrance into the bladder by the cicatricial horny thickening of the pelvic cellular tissue. I have also sometimes observed that a cancerous affection of the bladder wall in the trigonum colli had more or less completely displaced the mouths of the ureters, whence, as often observed by others, continence of urine and the symptoms of uræmic poisoning will result; but suddenly, after the formation of a vesical fistula, the pent-up urine will flow away in great quantity and the uræmic symptoms will disappear. In other cases, as long as the affection is unilateral, it may be painless. A few times I have succeeded in remarkably emaciated persons in discovcovering hydronephrotic kidneys by palpation."

Apropos of these statements Mr. Todd[3] reports a

[1]Berliner klinische Wochenschrift, Nr. XXIII, 1869. Linksseitige Hydronephrose u. s. w., von Dr. F. C. Hotz.
[2]Ibid., Nr. XIX, 1880. von Dr. F. Rosenberger.
[3]Nouveau Dictionnaire de Medecine et de Chirurgie. Art. Reins par M. Labadie-Lagrave.
[4]Dictonnaire Encyclopædique des Sciences Medicales. Rein (Pathologie) par M. E. Lanceraux.
[5]Nordiskt Medicinskt Arkiv., Band V, Nr. XII. Orn der partielle Hydronefrose, etc, af Dr. Chr. Fenger.
[6]Hildebrandt, loc. cit.

[1]Saexinger, loc. cit. Ueber Uterus Krankheiten.
[2]Gusserow, loc. cit.
[3]Todd, loc. cit, p 389.

case in which there was great pain in the neck of the bladder and a frequent desire to urinate, with alkaline urine, and, toward the end of life, incontinence from vesical irritability existed; at the autopsy the right kidney was found completely atrophied and the ureter converted into a large cyst; a cancerous mass in the bladder blocking up both ureters was also discovered.

There appears to be a pathogenetic relation between hydronephrosis and cystoid degeneration of the kidneys. This question had been ably discussed by Dr. Th. Ackermann[1] in an article describing the frequent simultaneous appearance of the two lesions, and to this paper we refer any who may be interested.

A patient came under the care of Prof. F. N. Otis[2] suffering from a persistently recurring spasm of the bladder that had resulted in a thickening of the vesical walls, dilatation of the ureters and hydronephrosis; in the opinion of Prof. Otis a contracted meatus urinarius was the primary cause of the whole difficulty.

Various anomalies of development may lead to hydronephrosis. Dr. F. A. Walter,[3] many years ago, described an instance occurring in a man thirty years of age, in whom were found on both sides double ureters and pelves: the right and lowermost ureter opened almost in the middle of the urinary bladder; the right and uppermost, after it had crossed in front of the lower, opened close behind the caput gallinaginis; the upper half of the right kidney "durch örtliche Vereiterung" was changed into a moderately strong bladder, while the half of the kidney corresponding to the lower ureter was perfectly healthy; nothing is said of the permeability of the upper ureter, but the drawing shows it as compared with its fellow to be from three to five times dilated.

Two similar instances of a limited hydronephrosis with double ureters and pelves, the one occurring in an aged widow, and which had been diagnosed as hydrovarium, and the other in a maniac 69 years of age, have been recorded by Dr. A. Heller[4], of Erlangen.

Prof. Simon[5] mentions as a comparatively common, though rarely noted, cause of hydronephrosis the formation of valves[6] at the ostium pelvicum, although the rest of the ureter is perfectly permeable. Of the cases collated below, eleven as to their causation fall into this category.

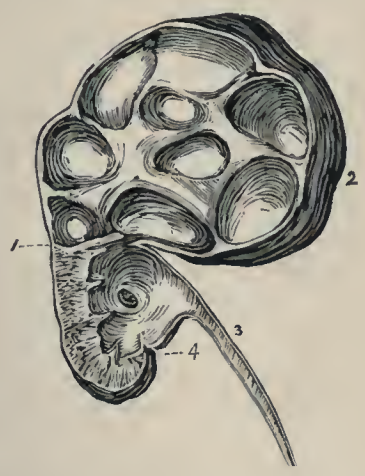
In those subjects where the kidney occupies a very deep situation, and where the initial portion of the ureter manifestly could be easily compressed or flattened; a curious instance of such compression is related by Dr. Labadie-Lagrave[7]. At an autopsy a kidney was found atrophied because of hydronephrosis, this lesion, in its turn, being dependent on a retention of menstrual fluid in one of the halves of a bifid uterus, which, forming a large tumor, by gradual compression, had rendered the ureter impermeable.

Prof. Kehrer,[1] of Heidelberg, in a recent article has called attention to the fact that large hydronephroses are only met with where there is a long continued but not complete obstruction to the flow of urine, or where, as sometimes happens, the obstruction is intermittent. This writer believes that displacement of the kidney, as thought by some, cannot cause a serious continence of the renal secretion.

In certain cases the most careful scrutiny has failed to find any mechanical obstruction, and their ætiology, therefore, is obscure.[2] In literature are recorded other causes of hydronephrosis, as abscess of the bladder, supernumerary renal arteries, congenital absence of ureters (Cruveilhier), imperforation of the ureter in its whole length (Bonnet), diverticula of the bladder (Ebstein); to sum up the ætiology, however, it may be stated that any obstacle to the continuous and free flow of the urine from the calyces into the pelvis, from the pelvis into the ureter, or from the ureter into the bladder, whether it exist on one or both sides, can lead to the development of hydronephrosis.

Many conditions, such as the position of the obstacle, the completeness of the stenosis and the duration of the lesion, may greatly modify the pathology of hydronephrosis: the lesion, too, may be bilateral, unilateral, or in rare cases even partial, *i. e.*, where not all of the calyces of one kidney are involved.

A very interesting case of the latter variety has been described by Prof. Fenger:[3] the patient was a young man in whom had been developed a renal tumor of traumatic origin; this, being punctured, poured forth urine. An inguinal abscess caused the death; and, at the autopsy, a partial hydronephrosis, limited by the superior portion of the kidney and formed by the distension of only one calyx, whose orifice was obstructed by a valve-like growth, was found.



Right partial hydronephrosis from valvular closure of the uretur, from Dr. Fenger's paper on "Partial Hydronephrosis"
1, Valve. 2, Hydronephrotic sac. 3, Uretur. 4, Normal calyces and papillar.

[1]Ackermann, loc cit., Seite 456.
[2]Otis, *Med. Gazette*, April 23, '82, page 123.
[3]F. A Walter, Einige Krankheiten der Niere und Harnblase, Seite 14. Oertliche Vereiterung der Niere.
[4]A Heller, deutsches Arch für klin. Med., Heft II, Seite 267. Hydronephrose der einen Nierenhälfte u. s. w. und Ibid, Heft VI, Seite 276.
[5]Simon, loc. cit. [6]"Klapperbilduug."
[7]Labadie-Lagrave, loc. cit., p. 12.

[1]F. A. Kehrer, Archiv. für Gynäkologie, '81, Heft III, S. 370.
[2]Rosenstein, loc. cit., p. 358. "In manchen Fällen ist kein mechanisches Hinderniss zu finden und die Ætiologie daher dunkel."
[3]Fenger, loc. cit.

It has more often happened, however, that these partial cases exist coincidently with double ureters; in a recent publication a German writer[1] has gleaned from literature seven such instances.

When the obstacle exists in the ureter or bladder there is found inside the hilum of the kidney a spheroid tumor of greater or less size, the walls of which are formed of the dilated pelvis. The kidney, pushed back, compressed and atrophied, fits over the tumor like a sort of helmet, and usually presents a deeply lobulated surface; this distension may, at the same time, occur within the pelvis and calyces.

At first the dilatation is slight and reacts with especial force on the walls of the pelvis, the renal tissue still offering to the touch its normal resistance; a little later the surface of the organ becomes covered with projections produced by distension of the calyces and atrophy of the renal substance, the kidney, as a whole, now assuming the flabbiness of a cyst filled with fluid.

When the pelvis and beginning of the ureter are distended inside the hilum the tumor assumes a pyriform shape, pointing downwards, as a rule, one or both kidneys attain great size and are transformed into immense bags, on whose inner surfaces are seen little islands of renal substance; on making a cross section the basin appears dilated, the papilæ more or less sunken, and the calyces elongated and funnel-shaped; to the touch the papillæ, recognizable by the convergent red striæ, seem roughened.

In the more severe cases the calyces are so dilated as to form large pockets continuous with the dilated pelvis; the latter when exsected and extended upon a table, presents countless folds, is nearly always opaque, of a pure white color, and in its substance blood-vessels can rarely be distinguished. The wall of the sac now is altered to dense connective tissue, that varies in thickness at different points; it has even been observed of the consistency of cartilage; generally, too, when the ureter participates in the expansion its muscular layer is hypertrophied, this condition being strongly marked in those cases where it has been excited in the effort to expel a calculus. The tubular and cortical substances, as a result of continuous compression, become so atrophied that M. Rayer[2] has seen the kidneys of a child that were no larger than a berry or Lima bean, and those of an adult, that, stripped of their membranes, weighed but two ounces. In all hydronephroses the renal blood-vessels are developed out of proportion to the size of the renal parenchyma.

Those curious partial hydronephroses, to which allusion has been made, have been often observed in some of the lower animals, notably in the ox.[3] In this beast cysts of the size of a child's head, and containing urine more or less modified, and sometimes calculi have been seen. Such an anomaly in man, the earliest one, perhaps, on record, has been finely depicted by M. Rayer.[4]

[1] Englisch-Deutsche Zeitschrift für Chirurgie, 1878. Band XIII, Seite 11 und 252. "Ueber primäre Hydronephrose."
[2] Rayer, loc. cit., p. 479.
[3] Rayer, loc. cit., p. 499, "chez le bœuf," etc.
[4] Rayer, Atlas des Maladies des Reins. Pl. XXV., Fig. V.

Typical case of right hydronephrosis, posterior view, calculus found in the ureter that was dilated above and normal below where the stone was engaged.
Rayer, Atlas des Maladris des Reins, pl. xxi.

These tumors may attain enormous proportions. In the case of Johann Elzer, reported by Dr. Hotz,[1] the cyst extended from the first sacral vertebra and crest of the ileum clear to the pancreas, behind the border of which the upper limit of the cyst was lost. To the right it extended to and became adherent with the right kidney; it, moreover, included the left kidney, that was transformed into a tumor the size of a child's head. In addition, pushing outwards the left circle of the ribs, it considerably displaced the heart and thoracic organs, and was not limited until it had passed at least three inches beyond the linea alba.

Numerous adhesions to the neighboring organs constitute an unwelcome though frequent complication. In an autopsy performed by Dr. Wilien[2] the cyst was found wholly adherent to the peritonæum, and partially so to the omentum, pancreas, colon descendens, sigmoid flexure and spleen. The coils of intestine regularly are displaced, and for the most part lie in front of the tumor. Diastasis of the recti muscles has also been noted.

The histological lesions in hydronephrosis have been little studied. In severe cases there is first a nuclear infiltration[3] about the uriniferous tubules that is followed by a fibrous condition; the collecting tubes are obliterated, their epithelium undergoing embryonic retrogression; the glomeruli are either fibrous or cystic, and the lining of the convoluted tubes undergoes a fatty-granular degeneration. An examination made by Professor Krause,[4] of Göttingen, showed that the canaliculi of the cortical portion were distended and the Malpighian bodies enlarged. In the medullary substance the loops of Henle were greatly dilated and filled with fibrine casts and calcareous infarctions. The ureters exhibit a great variety of alterations; regularly they are narrowed below and dilated above the points of stoppage. Cases are known, though, where narrowing occurred throughout the whole caliber, this being the

[1] Hotz, loc cit.
[2] Wilien, Trans. Am. Med. Ass'n, 1875, p. 271.
[3] Journal Am. Med. Ass'n Jan. 5, 1884, p. 10.
[4] Krause, loc. cit.

general condition where the obstacle exists near the ostium pelvicum. It has not rarely happened that the dilated ureter has acquired the dimensions of the intestine. In hydronephrosis arising from uterine difficulties, much dilatation is rarely seen. Coincidently with the widening occur thickening of their walls, hypertrophy of their muscular coat, and often an assumption of anomalous forms. Thus, Dr. C. J. Hare[1] observed an instance in which one ureter perfectly simulated the shape of the letter S.

Hydronephrotic fluid consists of the normal secretion of the kidneys more or less altered. Rarely, as in the case of Lee, (Labadie-Lagrave), it is urine pure and simple. In slight cases there is, of course, little modification in the secretion, but in the more advanced cases there is, as a rule, much change, urea rarely being present.

Half a century ago M. Rayer[2] demonstrated that albumen and urea were present in renal cysts; a careful examination of 600 cub. ctm. from a typical case revealed the following:[3]

Fluid weakly alkaline, specific gravity 1000.
0.33 grm. chloride of sodium, sugar, inosite.
0.47 " urea, biliary coloring.
0.11 " albumen, matter, etc., not detected.

The sediment from another case[4] was composed of numerous crystals of calcic oxalate, an abundance of lymphoid cells, uric acid salts, urea, and much albumen.

In Hotz'[5] patient the fluid was reddish-brown, slightly turbid, and odorless, holding in suspension albumen, broken down red blood corpuscles, but no traces of uric acid. Sir Spencer Wells[6] removed twelve pints of fluid from a young girl, that gave the following results on examination: color, a clear, light yellow; odor, faintly urinous; specific gravity, 1006. On standing a few floculent clouds formed. Urea, urates and chlorides were found in the proportions of normal urine. The microscope showed a few pus cells, many red blood corpuscles, some squamous epithelial and granular cells, but no tube casts or crystals; slight traces of albumen and phosphates, but no sugar were detected. The same surgeon, as well as Mr. Cooper Rose,[7] have mentioned examples in which there was no urea, and even none of the constituents of urine. The account[8] of a very unique case recently published makes mention of a gas, supposed to be carbonic dioxide, that developed in the cyst and gave rise to a metallic, tympanitic sound on percussion, and, when acetic acid was added to the contents of the tumor, gas in considerable quantity was evolved. The accumulation of fluid in these sacs is often enormous. Glass[9] observed a patient born with fluid in the abdomen, which at her death, at 23 years of age, contained nearly thirty gallons (100,000 c.cm.) of copper-colored serum; over nine gallons (36,000 c.cm.), as reported by Dumreicher,[10] were found in a case of P. Frank's—and Prof. Simon[1] watched for several years a patient, from whom, through an artificial fistula, there was a daily discharge of over six ounces (200 c.cm.) of a sero-mucous, albuminous nature.

From a study of the above facts these conclusions are reached: first, that so long as any of the renal parenchyma is capable of work and serous transudation takes place, the normal urinary ingredients in the sac will be preserved and augmented; second, that when total destruction of the secreting portion of the kidney occurs, a fluid more or less sero-mucous in nature remains, that, if a ferment is prevented from entering, will exist undecomposed for an indefinite period of time.

Hydronephrosis of slight degree causes no symptoms, and if the sac be unilateral old age may be reached without the discovery being made that any trouble exists. In more severe cases, however, symptoms referable to impeded activity of the kidneys, and to the presence of a large abdominal tumor, may be expected.

There have been noted severe pain in the bladder and vesical region, with constant desire to urinate (Todd),[2] total anuria, intermittent accumulation and escape of the renal secretion (Morriss),[3] bearing down pains with sensation of constriction (Hildebrand),[4] obstinate constipation from compression of the intestine, a cirrhotic or varicose appearance of the superficial abdominal vessels from disturbance of the circulation (Moreau),[5] etc.

In bilateral hydronephrosis, which sometimes accompanies cancer of the uterus, the supervention of acute or chronic uræmia may be looked for at any time.

Generally a palpable tumor that may be of great size is found in the abdomen. It is situated in the flank, and regularly extends from the region of the lumbar vertebræ forward to the umbilicus, downward to the iliac region, and upward into the hypochondrium. Displacement more or less of the viscera occurs, and on palpation distinct fluctuation, on percussion a dull note, may be expected. These tumors, by their constant growth, interfere more and more with the functions of the diaphragm, though, with the exception of a feeling of tension, they are often painless.

But because of the great advance in abdominal surgery, the differential diagnosis of hydronephrosis from other tumors similarly situated must be regarded of the first importance, though, unfortunately, it is attended with many difficulties.

It is most gratifying, however, to an enthusiastic believer, as the writer is, in the ultimate approach to something of perfectibility in surgical method, in the recognition and therapy of any subject, to trace a gradual, though often slow evolution from chaos to a state akin to order; and in respect to no other malady, as is our purpose to show, has this welcome change been more apparent during the last twenty years than in hydronephrosis.

[1] Hare, loc. cit., p. 29.
[2] Rayer, loc. cit., p. 480. J ai recomme. dans ce liquide, de lierée et une quantité notable d'albumin," etc.
[3] Krause, loc. cit.
[4] Heller, loc. cit.
[5] Holtz, loc. cit.
[6] Sp. Wells, *Medical Times and Gazette*, 1872, Vol. I p 483.
[7] Cooper Rose, loc cit
[8] F. A. Kehrer, Arch. für Gyn., Heft III, p. 371.
[9] Rayer, loc. cit., p. 538.
[10] Simon, loc. cit., S. 187.

[1] Simon, loc. cit., s. 187.
[2] Todd, loc. cit.
[3] Morriss, *Lancet*, vol. 1, 1876, page 637.
[4] Hildebrand, loc. cit.
[5] Labadie, Lagrave, loc. cit., page 18.

[1] "The discrimination of an hydronephrosis from tumors of another kind, but especially from ovarian cysts, unless its gradual development be observed, must be very difficult, if not impossible." Many mistakes of surgeons of the first order are, therefore, recorded in medical literature. Nearly two centuries ago Bonetus[2] diagnosed such a case as a swollen spleen, and in our own day men of undoubted skill, as Professors Esmarch,[3] and Billroth[3], and Sir Spencer Wells,[4] with others perhaps less widely known, have each regarded the lesion as an ovarian cyst, and have operated for the latter affection. However, the statement [5] "that the diagnosis of an ovarian cyst from a nephrectasis in a very large tumor cannot be made apparent," is, it seems to me, now susceptible of some modification; for, by bearing the following statements in mind, an accurate diagnosis can be made in a good proportion of cases.

First. If a reliable history of the case be obtainable, it may be expected that any renal tumor, in its earlier stages, would extend forward from the lumbar spine, having first been noticed between the false ribs and ilium; while an ovarian cyst has, in all probability, first appeared in one inguinal or iliac region, and increased from thence upward and inward.[6] "Therefore," as Prof. Krause well remarks, "the importance of a careful observation of ovarian tumors in their early development, is very obvious."

Second. [7]Large tumors of the right kidney usually have the ascending colon on the inner border of the tumor. Tumors of the left kidney are usually crossed from above downwards by the descending colon.

Third. Regularly ovarian tumors are in front of the intestines, renal tumors are behind the intestines. The exception to this rule must occur only in rare and isolated cases. The intestine may not be recognized on percussion, but when rolled between the fingers it contracts into a firm, cord-like movable roll, or the gurgling flatus along it may be detected by the patient or by auscultation; to obtain tympanitic resonance, the colon might be inflated with air through a long elastic tube per rectum; but a surer means is to inject water in addition, whereby, the air can be forced clear to the ileo-cœcal valve. On the left side the tube may sometimes be felt through the abdominal walls. The discovery of intestine in front of a doubtful abdominal tumor should always lead to a careful examination of the urine, which, in renal trouble, may be expected to contain blood, pus, albumen or epithelial débris.

Fourth. [8]In ovarian tumors there is a movability of the cyst *in toto*, a condition that is never seen in hydronephroses.

Fifth. In renal cysts the uterus is freely mobile; in ovarian tumors this is hardly apt to occur. Dr. Rosenberger attaches much importance to this symptom, to which he says too little attention has been given. The best method of examination is by the hand introduced into the rectum, and for its effective accomplishment the use of an anæsthetic is required. [1]By this means, any connection of the tumor with the ovaries, uterus or bladder, may be mapped out with great exactness; with the other hand upon the abdomen, the pelvic organs may be defined from those viscera lying higher up; and, if this palpation can be made with half the hand (four fingers), not only may we determine whether the cyst is connected with the pelvic organs, but whether it extends from above down into the pelvis. This aid to diagnosis is especially valuable in hydronephrosis, as in this lesion the pelvic cavity is not narrowed, and because the dilated kidney can be felt as a single mass reaching into the introitus of the pelvis; moreover, the presence or absence of stones in the ureters, or change in their caliber can easily be made out. Trichmann (Labadie-Lagrave) invented an instrument bearing a certain resemblance to a lithotrite, which, when introduced into the bladder could, at will, stop the mouth of one ureter; thereby determining whether a ureter be at fault. Unfortunately, though the instrument may be employed on either sex, its use requires a practiced hand.

Sixth. [2]Just as ovarian tumors are usually associated with some disturbance in the catamenia or change in the mobility or shape of the uterus, so there is regularly found in connection with renal tumors some history of calculus, nephritic colic, hæmaturia, albuminuria, or change in the quantity or state of the urine. In rare cases, it must be admitted, this rule does not hold good.

Seventh. If some of the contents of the tumor be procured through a small canula, or by aspiration, its examination will greatly aid the diagnosis. If there be found in the fluid paralbumen, colloid substances or cylindrical epithelium,[3] they argue the presence of an ovarian cyst, while any trace of urinary ingredients or of pavement epithelium would indicate an hydronephrosis. A confirmation of the diagnosis may be arrived at by sounding through the canula with a long, slender, metallic sound. This instrument, if the cyst be of renal origin, can be thrust to the deepest portion of the kidney and swept under the liver and dome of the diaphragm, and to some extent down into the pelvis; if the tumor proceed from the ovary, the sound cannot reach nearly as high, but can be easily pushed far deeper into the pelvis. It is proper to add, that though the weight of authority seems to be in favor of an exploratory puncture of these tumors, with the utmost care, there is danger of supervention of peritonitis from the wound.

Eighth. [4]If the tumor be partially emptied, it will, if renal, be felt growing smaller in the direction of the kidneys; if ovarian, in the direction of

[1] Rosenstein, loc. cit. Die Unterscheidung, u. s. w.
[2] Bonetus, loc. cit., p. 290, obs. xxii. Quidam splenam intumnisse, etc.
[3] Kroner, Arch. für Gynäkologie, Bd. xvii. Rechtssirtige. H. U. s. w.
[4] Wells, Diseases of the Ovaries, p. 216.
[5] Krause, loc. cit.
[6] Wells, loc. cit., p. 222, and Braur, Lehrbuch der Gesammten Gynækologie, S. 927. Die linkssietige hydronephrosen, u. s. w.
[7] Simon. loc cit. Seite 208
[8] Rosenstein, loc. cit., and Simon, l. c. S 205. "Die Bewegliehkeit der Hydronephrose als Ganzes ist gleich Null."

[1] Simon, loc. cit S. 88. The author has performed this 130-150 times.
[2] Wells, loc. cit. p. 223.
[3] Simon, loc. cit. p. 212.
[4] Simon, loc. cit., p. 214. [4] Simon, loc. cit., p. 214.

the ovaries; and if it be wholly emptied, a repetition of the sounding will be of value.

[1]Incision of the tumor followed by introduction of the finger has been practised. By this method the renal calyces were easily recognized as round or crescent-shaped cavities, that were covered with mucous membrane and bounded by sharp walls. In rare cases fortunate accidents have been of much assistance; thus, as noted above, it has happened that when a patient was placed in a certain position the tumor could be emptied through the bladder by external pressure, and in a few instances the ureter, enlarged, could be felt through thin abdominal walls.

[2]The discrimination of an hydronephrosis from other abdominal tumors is more easy to make, and its discussion will be dismissed in a few words: In renal cyst the swelling does not change its position with that of the patient, in ascites it does; echinococcus cysts are distinguished by the hydatid fremitus, and if situated in the kidneys by the escape of hydatid vesicles in the urine; pyonephrosis usually gives more severe constitutional symptoms and causes recurrent rigors and signs of suppuration, the same being true of perinephritis and renal abscess; finally [3]the "possibility of a horse-shoe kidney must ever be borne in mind" if from the symptoms an hydronephrosis be suspected, but the colon ascendens and descendens take their normal course.

The differential diagnosis between hydronephrosis and certain renal troubles that have a somewhat similar clinical history is often attended with difficulty, and to facilitate matters, a diagnostic table, slightly altered from one devised by Dr. J. A. Octerlony,[4] is appended.

Cancer Renis.	Hydronephrosis.
Generally unilateral tumor of enormous size.	Often bilateral, and of small size.
Tumor stationary, does not move with diaphragm.	Tumor fluctuating.
Runs a rapid course.	Of chronic character.
Well-marked cachexia setting in early.	No cachexia.
Pain generally intense and rarely wanting.	Regularly painless.
Hæmaturia occurs in fifty per cent. of the cases.	No hæmaturia.

Cystic Degeneration of Kidneys.	Hydronephrosis.
Always bilateral.	Often unilateral.
Tumor soft solid, non-fluctuating	Tumor fluctuating.
In later stages, dropsy.	No dropsy.
Hæmaturia.	No hæmaturia.
Occurs in those over 30 years of age	Often congenital and in the young.
Tumor fairly well preserves shape of kidney.	Tumor does not preserve shape of kidney
Tumor slowly increases.	Tumor often of rapid growth.

A neonatus with double hydronephrosis is never viable, and even in those congenital cases when only one kidney is involved, life is often cut short because of the pressure exerted on the thoracic organs. [1]A unique case, however, in an infant, where existed atresia of both ureters with hydronephrosis of one kidney and cystic degeneration of the other, who survived 15 days, is recorded.

In those instances where the malady is bilateral, the danger is proportional to the degree of atrophy in the renal substance, all cases being more or less quickly fatal; these patients are not usually confined to bed but a few days before death, which regularly takes place in a rapid and unexpected manner.

The prognosis[2] in all hydronephroses that are uninterfered with is, in general, unfavorable, for, as the tumor attains great size, it occasions by pressure unbearable distress, and interferes with the functions of nutrition and respiration. The natural sequence is traumatic or spontaneous rupture, (an accident observed in four patients by Prof. Simon), or suppurative inflammation followed by death. Another event to be dreaded in unilateral cases is the involvement of the other ureter, though this accident may be deferred many years. A curious instance[3] of the latter variety is recorded where the first symptoms of the lesion were manifest nearly 50 years before death, that was caused by a calculus caught in the opposite ureter.

A spontaneous cure with *restitutio in integrum* can never be expected, since a kidney so altered and atrophied can never perfectly recover and perform its functions.

No longer ago than 1870 an eminent surgeon wrote in regard to the treatment of this lesion: "Of[4] therapy there can scarcely be any account; a careful avoidance of things hurtful to the other kidney must be the only problem. An opening of the hydronephrosis has been undertaken several times, partly with good, partly with bad results; chiefly it appears from diagnostic errors." And yet, but a few months earlier, an operation destined to revolutionize the surgery of the kidney was performed, for, on April 2, 1869, Prof. Simon, after a long series of experiments and careful study, first successfully practiced nephrectomy.

Purely medical treatment has rarely been of much avail. M. Rayer[5] advises, if the obstruction seem due to a calculus, that an attempt be made to soften or dissolve it, removing as far as possible all the causes that tend to inflame the cyst and increase the secretion of the pelvis and calyces; if the tumor seem caused by a malformation, as is probably the case if nephritic colic have been absent, the same author teaches that by frictions and light compression, the posture of the patient being continually changed, the normal course of the urine may be facilitated; and that, when the cyst walls seem to take on inflammation, an evil result may be aborted by local and general blood-letting, emollient cataplasms and the evacuation of the large intestine by enemata and purgatives.

As it is not possible to recognize this affection till

[1] Simon, l. c., p. 216.
[2] Ibid, loc. cit. p. 217.
[3] Hotz, loc. cit. p. 235.
[4] Octerlony, J. A. Trans. Amer. Med. Association, 1875. P. 143.

[1] Th. Ackermann, loc. cit.
[2] Simon, loc. cit.
[3] Rayer, loc. cit. Obs. II. A case is also noted here where the symptoms lasted 23 years.
[4] Rosenstein, loc. cit. "Von Therapie kann wohl kaum die Rede," u. s. w.
[5] Rayer, loc. cit., § 833.

it has reached a considerable development, prophylaxis is out of the question. In calculous cases Dr. Rosenstein[1] asserts that the alkaline waters are very efficacious as dissolvents, and in unilateral cases the treatment should consist of a careful regimen, scrupulous cleanliness, stimulation of the skin by frequent baths, and all means that are of use to keep the healthy organ in good working condition.

M. Lecorché[2] advises the abundant use of liquids and the avoidance of animal food where there is any reason to suspect a uric acid diathesis.

Where, as often happens, the ureter closes over the calculus by a sort of spasm, M. Lancereaux[3] proposes the hypodermatic use of morphine. In a case observed by the writer, cataplasms of stramonium leaves have given much relief.

It is of interest to add that there are three[4] recorded cases in which manipulation has effected a cure. In two of these cases, instructions were given for the abdomen to be rubbed with mercurial or iodine ointment, and while this was being carried out the tumors suddenly disappeared, their disappearance being followed by a large discharge of urine. In the third case the mother of the patient was in the habit of rubbing the tumor to relieve the pain, and the effect of the pressure was to cause the tumor to disappear and the bladder to swell up. In only one of these cases, however, was the relief permanent.

"The sum of medical doctrine on the subject amounts to this: Palliate where you can; do no mischief where you cannot." Every attention is to be paid to the general health of the patient, and all matters of diet, hygiene, tonics for the body, and consolation for the mind, are to be administered to support the strength and cheer the spirits. The true method of medical treatment "is to seek temporary relief of urgent symptoms by rational expedients, and either to encourage a buoyant anticipation of ultimate rescue by operation, or to lead the patient by degrees into the usual quiescence of confiding resignation to the inevitable, by the adoption of the tranquilizing motto, *Cede Deo.*"[5]

It is obvious that in the great majority of cases, for the radical cure of hydronephrosis, recourse must be had to the art of surgery, and it is a matter for sincere congratulation, as the data collected below by the writer show, that the experience of less than fifteen years has negatived the assertion, [6]"Die operative Therapie der hydronephrosen hat bis jetzt noch keine glängenden resultate geliefert."

The various operative procedures that from time to time have been practiced, may be resolved into two general classes: First, extirpation; second, the different operations to obliterate the cyst.

Again, broadly speaking, extirpation can be conducted in two ways—either through the peritonæum by abdominal nephrectomy, or extra peritonæum by lumbar nephrectomy.

[1] Rosenstein, loc. cit.
[2] Lecorché, loc. cit,
[3] Lancereaux, Dict. Encyclopæd. des Sciences Medicales. Art. Rein (Pathologie). J'ai des raisons de croire que dans les cas de ce genu, etc.
[4] Lucas, *British Med. Journal*, Sept 29, 1883.
[5] Spencer Wells, loc cit, p. 259. Reference is here made, of course, only to the most severe cases.
[6] Hotz, loc. cit., s. 236.

Abdominal nephrectomy may be divided into several steps.

First step. Incision of the abdominal walls. There is some diversity of practice about this incision. Thus, Prof. Esmarch[1] made a cut through the linea alba 15 ctm. (6 inches) in length; in a case of Dr. Kocher's[2] the incision was begun at the xiphoid appendix, and prolonged below the umbilicus; while in a patient of Dr. Martin's[2] the knife was first plunged into a spot about 5 ctm. (2 inches) above the umbilicus. In some instances, as suggested by Prof. Langenbuck,[3] an incision along the outer edge of the rectus abdominis, in the linea semilunaris, is recommended.

Second step. Isolation of the kidney.

After having detached the tumor from the portions of intestine or omentum that adhere to it, the peritonæum covering the anterior face of the kidney, and which generally is very thick, should be incised. Dr. Kocher recommends the incision of the posterior peritonæum to be made outside of the colon ascendens or descendens, or above the transverse colon, attributing one failure, though the operation was unfinished, to the fact that he incised the peritonæum below the transverse colon.

Third step:

The tumor uncovered, the cellular tissue by which it is adherent to the diaphragm, liver, spleen, etc., must be cut, carefully guarding against hæmorrhage that often is excessive, Prof. Esmarch,[4] in one case, being compelled to take, in all, sixteen ligatures. In the second case, for which nephrectomy was practiced, the patient died on the fourth day from hæmorrhage from the pedicle. The remaining procedure is similar to that so familiar in ovariotomy, viz.: Puncture to let off the contents of the cyst, isolation of the mass, ligation of the pedicle, careful sponging of the peritonæum, and closure of the wound.

Lumbar nephrectomy may also be divided into several steps.

First step: Incision of the integument.

Many operators now make the incision of Linser,[5] cutting about 7 ctm. from a line striking the tips of the spinous processes and parallel with it, and extending it from the inferior border of the 12th rib to the crest of the ilium. Mr. Couper,[6] however, and others, have employed an oblique incision as in colotomy; Dr. Klineberger[7] has suggested that it be curved, with its convexity upwards and inwards, thus sparing the last dorsal and first lumbar nerves; Mr. Lucas[8] advocates a combination of an obliqne incision that should be higher than that for colotomy, that is, within about half an inch of the last rib and parallel with it, and of a vertical incision along the outer border of the quadratus lumborum, commencing at the upper edge of the last rib and extending to the iliac crest. The latter plan has been employed

[1] Simon, loc. cit., s. 220
[2] E. Quénu, Archives Gen. de Med., December, 1882, De la Nephrectomie
[3] Trans. International Med. Congress, vol ii, p. 278.
[4] Simon, loc cit S. 220.
[5] Quénu, loc. cit.
[6] Lucas. *Brit. Med. Journal*, Sept. 29, 1883, p. 614.
[7] *Medical News*, Dec., 1880, p. 750.
[8] Lucas, loc. cit. p. 615.

by Mr. Barwell, Mr. Morrant Baker, Mr. Golding Bird and Mr. House.

Second step: Uncovering the kidney.

The layers of the lumbar region to be incised are:

1. The fatty sub-cutaneous tissue.

2. A slender muscular layer.

3. The very firm lumbar aponeurosis. Here is an important land-mark, the external border of the sacro-lumbalis that is to be pushed to the inside.

4. The very strong middle lamina of the aponeurosis of the transversalis. This should be incised upon a grooved director that has first been bent on itself to avoid cutting the first lumbar and 12th intercostal vessels, which are first to be tied and then cut.[1]

5. The quadratus lumborum.

After cutting through the external border of this muscle, the anterior lamina of the transversalis, best torn by the forceps and finger, appears. The couche viscérale of M. Tillaux, composed of the kidney and colon joined, is the last structure to come in view. The kidney occupies the superior portion of this region.

Third step: to isolate the kidney.

This step is often very difficult; it has even been found impossible to execute, and the operation has had to be abandoned. The object is to be accomplished chiefly by the finger, aided by the scissors but slightly.

Any tearing of the renal substance, as it is likely to result in severe hemorrhæge, is, if possible, to be avoided. In such a complication Zweissel[2] seized the torn end of the kidney with a Nelaton's forceps and then proceeded to enucleate. Two other grave accidents have happened, injury to the colon, and opening into the peritoneal cavity. The peritoæum is perhaps, to some extent, unavoidably bruised even if it be not severed.

Mr. Barker advises that extirpation of the kidney with its envelope, that is almost an inch thick, should not be attempted, but the kidney should be extirpated alone. He asserts that separation of the kidney from its capsule, enucleating the organ with the finger, is always easier than to separate the capsule from the ambiant tissue; thus, in one of his cases, he lost much time, and copious hæmorrhage occurred in trying to get out the mass entire; later, changing his tactics, he enucleated with ease the kidney from the perirenal tissue, the latter course occasioning but little loss of blood.[3]

In hydronephrosis operated on by the lumbar method, the cyst should be punctured and its contents drawn off for the purpose of reducing its volume, that it may the more readily be drawn through the costo-iliac space.

Fourth step: Ligation of the pedicle.

On drawing out the kidney the pedicle should be grasped with one or two forceps and, as in ovariotomy, ligated. It is better,[4] perhaps, to tie the pedicle in two portions by passing a curved aneurism needle, armed with a double thread, through its middle, taking care to avoid the vessels and tying each part separately, this procedure giving greater security. Prof. Czerny[1] is of the opinion that it is better to cut the ligatures short rather than leave them out of the wound. A separate thread had better also be thrown about the branch of the renal artery that penetrates the superior portion of the kidney. The space obtained by the incision of Linser may be insufficient[2]. A second incision, parallel to the crest of the ilium, may be added, or the twelfth rib may be resected. Prof. Czerny has employed the latter method twice with success; in the first instance he resected 9 ctm. of the twelfth rib; in the second, he cut away subperiosteally considerable of the eleventh and twelfth ribs without opening into the pleura. But injury to the pleural sac may happen unless guarded against with the greatest care, as, in a patient of Dr. Dumreicher's of Vienna, the twelfth rib being rudimentary and the operator mistaking the eleventh for it, the incision was made too high.

Stimulated by this accident,[3] Dr. Hall, a prosector of Vienna, studied the topography of the twelfth rib and found that "the limit of the pleural cavity is represented by a line drawn from the superior border of the first lumbar vertebra to the extremity of the eleventh rib; this line strikes the twelfth rib when it is normal about 3 ctm. behind its cartilage; there the greater part of the anterior face of the rib is covered by the pleura. If the twelfth rib be absent there exists in its place a ligamentous tract that may be incised fatally on mistaking the eleventh for the twelfth." The rational conclusion, therefore, is before incising deeply, to be assured of the state of the twelfth rib.

If there is hæmorrhage from the pedicle, Mr. Lucas advises that it be not re-tied, but that the wound be stuffed tightly with sponges steeped in the perchloride of iron, and that a tight bandage be placed about the abdomen; in this way he saved one patient. The same writer has derived great benefit from wrapping the patient's extremities in cotton wool and flannel to guard against shock. 'Of course in these grave operations antiseptic precautions are called for, and during the first four or five days after the operation anything pressing upon or interfering with the wound which might produce bleeding, must be prevented. The bowels must be thoroughly emptied before the operation; opium and a low diet prescribed in the first days afterwards. The catheter must be used, if necessary, but regularly after the operation if the urine is scanty. It will be conceded that nephrectomy in this lesion is a *dernier ressort*, and as taught by Prof. Czerny, is to be tried when the life of the patient is threatened, and other therapeutics have proven ineffectual. M. Olliver,[5] however, has lately brought forward a point that may be of importance: He is in favor, in those lesions where but one kidney is involved, of the enucleation of the disused organ for the reason, that as often

[1] Quénu, loc. cit
[2] Quénu, loc. cit.
[3] Quénu. loc. cit.
[4] *Medical News and Abstract* Dec., 1880, p. 751

[1] Lucas, loc. cit, p. 615.
[2] Quénu, loc. cit., and Lucas loc. cit.
[3] Quénu, loc cit.
[4] Medical News and Abstract, p. 752. December, 1880
[5] M Olliver, Bulletin de l'Academie de Médicine, 2nd serie. Tome xii, p. 1077. De la Nephrectomie; "Mais d'autre part, l'ablation d'un rein," etc.

happens with the eyes, sympathetic trouble might be induced.

That a patient, after nephrectomy, can perfectly perform all of the bodily functions is shown by a case of pyonephrosis operated on by Prof. Czerny. Although very low at the time of operation, May 22, 1879, she rallied ; conceived in August of the same year ; aborted on November 12, 1879, and born in December, 1880, a healthy child, nursing it herself for over a year.[1]

Nephrectomy determined upon, where shall the incision be?

If statistics be of value, those of Mr. Barker[2] give 59 per cent. of cures by lumbar, 50 per cent. by peritoneal nephrectomy. Those of Dr. Harris[3] are also somewhat in favor of lumbar nephrectomy. But these cases include all varieties of renal lesions.

Mr. Knowsley Thornton[4] prefers the operation by Langenbuch's incision, the advantage being that the parts are better exposed than by the lumbar incision.

Mr. Tait goes so far as to advocate an exploratory abdominal section to determine the diseased condition and the advisability of nephrectomy.[5]

On the other hand, M. Quénu is of the opinion that lumbar nephrectomy is to be chosen, in that it permits, after the kidney is reached, an exploration and substitution of nephrotomy for nephrectomy, or *vice versa*. In addition, he believes that the abdominal method is to be reserved for the largest cysts. Mr. Barwell[6] also favors the lumbar method when practicable.

Prof. Czerny, while regarding the lumbar incision as the safer operation, recommends that by the abdomen if the kidney be movable. A very similar opinion is expressed by Mr. Lucas.

Lastly, in the words of Prof. Kehrer,[7] "that the median incision is the easier accomplished and preferable to the flank incision there can be no debate. The motive not to open into the peritoneal cavity is to-day, considering the circumstances, of no value. But I think, nevertheless, that the choice of the seat of incision should depend upon the peculiarity of the case, and upon the place where the swelling lies nearest the integument."

In the first table at the end of this essay, in which are reported the results of 31 nephrectomies for hydronephrosis, it will be seen that 19 of these cases were operated on by the abdominal method, and 11 by the lumbar method, the manner of operating in one case[8] not being learned. Of these 31 cases, 15, or a little over 48 per centum, recovered. Of the 19 cases on whom laparotomy was performed, 8, or a little over 42 per centum, recovered, while of the 11 cases treated by the lumbar method,[9] 7, or over 63 per centum, were permanently cured. It is, perhaps, fair to add, as Mr. Knowsley Thornton has stated, that the higher mortality at present attached to abdominal section was due to the fact that many of the cases were stumbled upon by operators intending to remove an ovarian tumor.

The causes of death in the fatal cases, when reported, will be found in the table referred to above, and which is believed by the writer to be fairly complete.

(Completed in the Next Issue.)

[1] Czerny, loc. cit.
[2] Med. chirurg. Transactions, 1880-1881.
[3] *Amer. Jour. Med. Sciences*. July, 1882.
[4] *Med. Times and Gazette*, May 6, 1882.
[5] W. Walter, *Brit. Med. Journal*, Sept. 29, 1883, pp. 6-7.
[6] *Lancet*, May 26, 1883.
[7] F. A. Kehrer, Arch. für Gyn., 1881, Heft III., p. 383.
[8] Case XXV.
[9] Doubt is also attached to one of the cures by the lumbur method. (Case VIII.).

THE MILK SUPPLY OF BOSTON, AND THE BENEFIT TO BE DERIVED FROM THE SPAYING OF COWS.

BY MR. LLOYD F. ABBOTT.

[Read before the Section for Clinical Medicine, Pathology and Hygiene of the Suffolk District Medical Society, February 27, 1884.]

The milk supply of Boston may be divided into three classes : first, that brought in on the cars, and commonly called railroad milk ; second, that brought in wagons from the surrounding country, and called out-of-town milk ; third, that from cows kept within the city limits. Each one of these may be divided into three classes : first, from the new milch cow ; second, from the farrow cow, or one that has been milked for a year or more ; third, from a springer, or one with calf. The nature of the new milk is very loosening ; it is well known among farmers that the first milkings given to a calf three or four weeks will scour it to death. This milk changes as it increases in age, until at the end of a year the milk of a farrow cow becomes very astringent. This milk, if given to a calf a week old, would have exactly the opposite effect of the other. The milk of the springer gradually changes until near calving ; it becomes more watery, and has a limey taste.

Let us first consider the railroad milk. The distance from the city and the number of hands through which this passes (all of which have to be paid) make the farmers' returns small. The difference between a farrow cow milked out and a new milch cow is usually from $20 to $25 ; the farmer can better afford to let his cows go dry from two to three months than to pay the difference. Railroad milk is therefore mostly produced from new milch cows and springers. Let us visit Mr. B.'s dairy. He makes milk the year round and has cows coming in constantly. Some cows may be milked up to the time of calving, but in most cases they will go dry from one to three months—usually about two—and will give but little milk for some time before. The low price that Mr. B. receives for his milk and the loss he sustains while his cow is giving none, make it necessary for him to use all that he can of it. This, together with the fact that he does not see or know the parties who use it, make it natural that he should send to market milk that he would not use himself. Mr. B. commences to milk at one end of the barn ; the first cow may be a new milch cow, possibly the first milking, and will fill, or nearly fill, a can. The next may be a farrow cow that has been milked for a year or more, or may be a springer about to calve ; in either case will give

but little, and it will take the milk of two or three of them to fill a can. Therefore the milk from the same dairy may be of the greatest possible extremes. Mr. B. having finished his milking, the milk being at a temperature of 100° F., sets it in cold water, which will reduce the temperature to about 55° or 50° F. The milk is then disposed of for the night. The morning's milking is managed in the same way, perhaps with the exception that the collector comes before there is time to cool the milk off. It is then placed in a wagon and carried from one to seven or eight miles to the depot, by which time the milk is thoroughly shaken up and the temperature has risen several degrees. If the car starts from this place, the milk may be put on and iced immediately; otherwise it must wait until the train comes along, and reach a still higher temperature. When on board the cars it is iced, and by the time it has reached the city, from 8 to 10 A. M., the temperature has been reduced to 50° or 45° F. It is then taken from the car to the milk stable, where it remains usually from one to two hours before it is prepared for the consumer and iced. In the meantime the temperature has risen several degrees. The milk remains in the ice chest until two or three o'clock the next morning, when the temperature has been again reduced several degrees. It is then loaded on the wagon and delivered to the consumer. If there is any left over it is taken home, iced, and used the next day. This milk, therefore, is from 24 to 36 hours old before it reaches the consumer, and what is left over has 24 hours more added to it, and still people wonder why milk does not keep longer. This is the supply which reaches the city from 8 to 10 A. M. There are cars which reach the city from 1 to 3 A. M., which bring the milk of the night and morning before; a part of this is used the same day, but most is not used until the following day. It therefore may be used twelve hours fresher, but oftener twelve hours older, than that reaching the city earlier in the day.

As this milk comes from so great a distance it does not pay to carry out brewery grains or refuse vegetables from the markets. The cows are fed on such fodder as is raised in the neighborhood and on meal or shorts. But the milk dealer in the city is so far from his source of supply that he knows but little if any more about the cows or the condition they are in, or upon what they are fed, than the person who uses the milk.

The producer of the "out-of-town milk," being nearer the city, receives more for his milk, which, together with the extra risk of miscarriage from the effects of feeding on brewery grains, makes it about an even thing with him whether he changes his cows once in twelve or eighteen months, or has them "come in" in that time. This milk is from new milch, farrow, and springer cows, and is produced to a great extent from brewery grains; it receives very nearly the same care as the "railroad" milk until it reaches the stable of the dealer instead of going to the depot. The driver of this team starts from 12 to 1 o'clock A. M., which makes it impossible to bring in the morning's milk, and as the milking is the last chore at night, but few of our out-of-town men raising their own milk, and the dairies being scattered, milk is usually collected in the morning for the next day. It will be seen that the "out-of-town" man may bring the milk of the night before, but as a rule does not; it is usually from twenty-four to thirty-six hours old. As the "out-of-town" man goes home in the heat of the day, often reaching it at 3 or 4 o'clock, it is impossible for him to keep his surplus over. He has a certain poor neighborhood where he skippers his surplus milk, that is, sells it on the street, or from door to door, from a third to a half less than the usual price, often making up the difference with water, and the poor will buy it because it is cheap, though not so good. Several years ago, when milk was selling for eight cents per quart, I knew one man who used to make his extra milk one-half water, and sell it for five cents per quart, thus making a "good thing" of it.

The milk raised in the city should be divided into two classes: first, that from cows kept to produce milk for market; and, second, that of cows kept for family use. The first class is found near breweries, or near the salt marshes, and, to a great extent, the food is brewery grains and rotten potatoes, or other refuse vegetables. Many who have cows keep a team to haul brewery grains and go around the market and collect refuse vegetables. The Milk Inspector, in one of his reports, mentions finding rotten potatoes in a milk stable, but as he did not find the cows eating them, did not consider it a case with which he could interfere. This milk may be, and often is, delivered to the consumer warm from the cow, but is thinner in quality, and will not keep as long as milk from cows fed on whole grain, grass, or hay. In fact, the milk partakes to a great extent of the substance on which the cow is fed. The dealer realizes a good price for his milk, and can better afford to pay twenty or twenty-five dollars in difference in exchanging his cows than keep one three or four months that is giving little or no milk. This milk is produced mainly from new milch cows, farrows, and light springers. It is the custom with this class of milk producers to buy a new milch cow and keep her farrow a year or more, and then get her with calf, which gives her a more suitable plumpness, by which means she is disposed of with better advantage to the butcher.

The second class of city cows are those kept for family use, usually well fed, and often overfed. A person wishing a cow for family use, not being posted in the market and no judge of a cow, usually pays a high price; if he is fortunate and secures a good one, he receives a good supply of rich milk. If he keeps a daily record of the amount of milk obtained, he will find that once in about three weeks there will be a time, sometimes affecting three milkings, that the cow will not give more than one-half or two-thirds as much as usual, and that after each one of these turns there will be a gradual decrease, until at the end of a year she will not give one-half as much as at first, and that not nearly as good. Not giving much milk, and constantly giving less, she must be disposed of for beef at a loss; or, if the owner wishes to keep her and have her come in once a year, he must have her got with calf three months after she has come in, when the milk will decrease in quantity as well as in

quality. To sum up, the owner of a cow under these circumstances is sapping the milk which he intended for his family for six or seven months, and going without for two or three months, for the purpose of getting his cow to give milk again and producing a calf, which, although the material he has consumed, if devoted to milk, would be worth a great many dollars, the calf will scarcely bring a dollar, and often has to be given away. Besides this, the owner has to run the risk of his cow's coming in in bad shape, or of miscarriage. There is no domestic animal so liable to accidents of this kind as the cow, owing to her being milked, a disadvantage which no other domestic animal labors under. In such a case she will give little or no milk.

What I propose as a means of improving the quality of the milk, and at the same time reducing the cost of production, is the spaying of cows for milk, an operation but little known even among veterinary surgeons. After two years' experience and inquiry, I have been unable to find any one in Boston familiar with the operation. It consists of removing the ovaries from a new milch cow, which takes away all desire or ability for reproduction, and makes of her a constant milker ever after. These are some of the advantages gained by the operation: First, an increase in the quantity of milk, as the animal has nothing else to do but give milk or grow fat, and by giving milk-producing food the quantity may be increased a third. Secondly, the certainty of having a constant supply of milk of the same quality. Thirdly, producing a richer milk and of even quality, as the animal is always in the same condition, all causes of change having been removed; this alone is inestimable in its advantages to the sick, or delicate children. Without this operation, milk obtained from a new milch cow under the most favorable circumstances will vary much; once in three weeks there will be a time, often affecting three milkings, that the milk is at fever heat, and will not keep as long by one-third as when the animal is in the ordinary condition. It is not an uncommon occurrence for a person in delicate health, or a child, fed on a milk diet, although the milk be from one cow, and the greatest possible care taken of it, to have a bad day or a feverish night, for which no reason can be assigned, but which may be traced to such a cause as this. Fourthly, decrease in the cost of keeping, for by the operation causes are removed which produce waste of material that now goes to milk. Fifthly, by this operation cows may be kept for years, giving the same quantity of milk, thus avoiding the loss sustained while the cow is dry and the liability to accidents during calving. Sixthly, the spayed cow fattens more easily, its flesh is better than that of the ox, more tender and more juicy; indeed, no one is ignorant of the fact that all domestic animals, female as well as male, deprived of their procreative organs, fatten more quickly than those that retain them, and the flesh of the spayed female is more tender and juicy than that of the male. By this means the farmer will realize a better price for his cows when they have passed their days of usefulness as milkers, and the public will be protected from a practice often resorted to by farmers to obtain the best possible price for old cows—that is, to bring them to the bull, intending that gestation should give them more suitable plumpness, so that they may be disposed of to better advantage to the butcher. The result of this is a mere bloated, flabby flesh, which easily taints; broth made from it is not rich, and is without flavor.

I first became interested in this operation early in 1880, through information obtained from a work translated from the French. I afterwards obtained other treatises on this subject and soon became convinced of the advantages to be obtained by it. I made inquiries among veterinary surgeons, but could find none familiar with the operation. While making inquiries upon this subject I learned that Hon. Josiah Quincy had had the operation performed at his farm in Quincy nearly twenty years ago. I was told that it was a failure. To ascertain the facts of the case, I called on him at his home. He told me that spaying was performed under the direction of his foreman, and although he lost a number of cows by the operation he considered it a success, and of great benefit to both the producer and the consumer of the milk; that the cows continued to give a large quantity of milk for a number of years, and that the milk was of a superior quality. It is by his permission that I refer to this. He also informed me that at one time he thought of publishing an article calling the attention of the public to the advantages of this method of producing milk.

My experience teaches me that it will increase the flow of milk and also improve the quality, and that although there will be a slight decrease at the end of a year, the daily average will be equal to that given at the time of the operation. I have one cow that was spayed in November, 1880, was then giving ten and one half quarts per day, and now, after nineteen months of constant milking, nine and a half quarts, and she now comes to the barn every night with milk flowing from her bag. To make a comparison: I have talked with those who have had a longer experience in keeping cows than I have. They all agree that this is a liberal estimate: a cow giving fourteen quarts of milk when she comes in is an extra good one; that at the end of ten months (she coming in once a year) she would not be giving more than three or four quarts, and that not suitable for use, at which time she should be dried off and not milked the other two months; or that an average of nine quarts a day for ten months and none the other two months is all that could be expected, and that this result can be obtained only under the most favorable circumstances. This would give 2,736 quarts. Now I claim that under this operation a cow giving fourteen quarts may be made to average that for three hundred and sixty-five days in the year, as she would increase enough after the operation to make up for any slight shrinkage at the end of the year, making 5,110 quarts against 2,736, and also better milk.

I do not wish to lead any one to think that this operation is without risk, but after two years of practical experience I am convinced that the risk, when the operation is properly performed, is less than in ordinary cases of calving.

THE ÆTIOLOGY OF TYPHOID FEVER.

[A paper read to the Chicago Medical Society, March 17, 1884.]

BY J. F. TODD, M.D., CHICAGO.

In the selection of the subject of this paper, I was not unmindful of the fact that the ground had been traversed by the ripest men in our profession, and that I could add nothing new to the thoughts and opinions that have found a fitting place in medical literature. The topic was chosen because of its inherent interest and importance with the hope that the society might be stimulated to a discussion of the subject. The general prevalence of typhoid fever in this country and Europe during the past few years, and the revival of the theory of "a contagium vivum" constituting its essential cause, has served to develop general distrust in prevailing methods of treatment, and widely divergent opinions respecting its ætiology. The researches of Graves, Brettonneau, Louis, Murchison, Budd and Liebermeister, the contributions of scores of learned authorities, and the recorded observations of thousands of intelligent practitioners of medicine, only enable us to say that typhoid fever is an "essential fever" in a certain sense contagious, in a certain degree preventable, and that it may be properly classed with the self-limited diseases; further than this nothing has been positively established. A variety of views have been advanced respecting its nature, the development of its cause and the laws of its propagation, all sustained by apparently reasonable hypotheses, but they have all failed to advance to the position of clearly demonstrable facts. We are confronted with mortality reports that deride every pretension to even an approximation to an exact knowledge of the cause, prevention or cure of the disease. It remains constantly with us; exciting but little attention from boards of health; seldom referred to by the public press; constantly encroaching upon human life as a certain fatal factor, and an approbrium of therapeutic art. Its essential cause—the nature of the propagating principle and the process of its elaboration—are the principal subjects upon which professional opinion is divided. Since Dr. Budd's time the discussion of this subject has only been rivaled by that of Pasteur and Bastian and their followers on that of the spontaneous evolution of animal life. The extremes of professional opinion in this country are expressed in the published works of two of our most celebrated American authors.

Dr. Flint says in his "Clinical Medicine:" "It is vastly probable, if not certain, that the effluvia from human excrement not containing typhoid dejections may cause the disease."

Prof. Bartholow, in his "Practice of Medicine," pags 689, says: "It is never produced by mere decomposition of animal matters, fæces or the contents ofsewers; it is essential to the formation of the poison that the typhoid germ be present, and this germ finds in these decomposing animal matters a suitable soil for its growth and development."

Dr. Harley and Dr. Bristowe, of England, entertain equally discrepant opinions and express them in yet stronger terms, the former, not content with an enunciation of the view of its spontaneous origin, adopts a classification,naming varieties of the disease with reference to supposed origin and anatomical lesions, as "simple inflammatory," "contagious" and "paludal," "enteric fever." Dr. Bristowe strongly inclines to the view that the cause of the disease is not "a mere inorganic or even organic result of decomposition, but like other contagia an organized living particle which has special endowments and unlimited powers of multiplication," a specific virus yielded by the bowels of patients suffering from enteric fever, and probably by them alone. This view is ably sustained by Liebermeister, and it is probably the commonly accepted view of the profession.

There is an immense amount of evidence that the germs of the disease are developed in typhoid excretæ, and conveyed by water, and the atmosphere, and probably by milk and diseased meat, in quantities sufficiently large to develop the disease in individuals susceptible to the infection. It would tax the patience of the Society even to briefly refer to the chain of evidence quite familiar to you all, no doubt, in support of this view of the propagation of the disease. The proof would seem irrefragible that water contaminated by the alvine discharges of typhoid fever cases is capable of producing the disease. It appears almost equally clear that it can be conveyed in milk, and the evidence is strong enough to warrant belief that it can be produced by meats contaminated with typhoid germs. The most important of all the questions in the ætiology of the disease is the old and mooted one as to whether or not it may originate *de novo*. Having no practical acquaintance with the use of the microscope, and only a general knowledge of the results of microscopical research it would be presumptuous to present the views of investigators in that line of inquiry. It is perhaps fair, however, to say that nothing conclusive or particularly valuable has been learned with reference to typhoid fever, and that it is yet an open question whether the microphyte observed in cases of fever occupy a relation of cause or result. A few years ago it was quite the fashion to ascribe the origin of the whole class of zymotic diseases to sewer gas and the decomposition of organic matter. It was an old belief, sustained by abundance of old authority. On its revival it enlisted the enthusiastic support of many able practitioners, and sanitary engineering and disinfection became the fashion of multitudes who promised the world comparative immunity from infectious diseases; the ordinary attendants of filth and poverty, in the slums of cities, where it most abounds, the character of food, insufficient in quanity, and wretched in quality, lack of clothing and fuel in inclement seasons, the influence of immoral practices transmitted through generations of people, all combined, was for the time treated as a matter of secondary importance when compared with filth as a factor in the production or propagation of zymotic diseases.

That belief, however, is fast giving way, and it is,

in fact, an open question, and a very doubtful one, as to whether the elaboration of typhoid germs is to any considerable degree influenced by filth deposits. Watson's lectures on the ætiology of continued fever clearly outlined the observations of the observant members of the profession before his time and since, and strikingly illustrated the fallacy of the idea of spontaneous origin of fever by reference to the domestic habits of the natives of the Arctic regions, and the tropics, the exemption from the disease in African slave ships and in English prisons, except when the disease was imported. He quotes the opinion of John Howard, whose sagacity in all matters pertaining to the physical requirements of prison inmates was only surpassed by his philanthropy: "That some cause other than filth, ill-ventilation and over-crowding is responsible for the production of fever." He further cites the fact, familiar to us all and confirmed by our own observations, that the putrid atmosphere of dissecting rooms and the noxious effluvia of rendering establishments do not produce the disease. Stokes, in his lectures on fever, gives a graphic account of the filthy condition of an overcrowded town of 6,000 people in the South of Ireland, in which no epidemic of typhoid had ever appeared; in fact, it was considered a remarkably healthy place, notwithstanding the fact that 4,000 people lived on 25 acres of land, breathing the exhalations from 7,000 cubic yards of fetid matter. He also quotes Dr. Pratt, a government medical officer, as stating that filth agencies cannot produce the fever. "Were it otherwise, Ireland would before this have been depopulated from sea to sea."

The theory of the causative influence of sewer gas has been lately quite vigorously opposed by Dr. George Hamilton in a lecture before the "College of Physicians and Surgeons, of Philadelphia," in which he quotes a recent statement of the eminent sanitarian, Geo. E. Waring: "*that the sewer gas theory in regard to typhoid fever was, in the opinion of sanitarians, exploded.*" He cited the fact that the filthiest cities are often exempt from typhoid epidemics, and that the best sanitary conditions confer no immunity from their occurrence—this view is strongly corroborated by a recent report of the sanitary superintendent of New York city, which gives a large increase of typhoid fever coinciding with marked improvement of sanitary conditions, and a season of more than ordinary salubrity. Professor Loomis, in his late work on "Fevers," sustains this view with the statement that the prevalence of the disease is relatively greater in the country, where sewer gas is unknown, than in cities where immunity from its influence is exceptional. In a valuable contribution to the *Medical Record* of New York, Nov. 17, 1883, Dr. Francis Delafield presented a statement of mortality statistics for that city, in which it appears that the mortality from typhoid fever was greater in 1864 than in any year since that time, and that the mortality and prevalence of the disease has so greatly varied during the twenty years, that no constant or highly important relation can be supposed to exist between the ordinary, slightly varying, local conditions and the disease.

In a monograph on typhoid fever, by Surgeon Francis A. Welch, of the English Army, published last year, he presents an analysis of a large number of cases for home and foreign military stations between the years 1860 and 1878 inclusive. His contribution abounds with facts illustrative of the influence of climate in modifying the course and mortality of the disease, with abundant evidence that under all circumstances of military life, in all countries and every variety of climate, the clinical and post-mortem features of the disease are essentially alike. "In heated plains and cool hills, the moisture of the sea-coast, the drouth of central India, combined heat and moisture, combined heat and dryness, the disease existed and developed in the phases familiar to European observers." He reports the existence of large numbers of cases in salubrious localities, and its total absence in others characterised by filth. In the stations on the west coast of Africa he gives a single case for 1867, notwithstanding the existence of the alleged factors of the disease in an unusual degree, "filth of every character abounded; the air, earth and water were polluted with fecal matter, and vegetable matter constantly undergoing decomposition in a climate noted for its insalubrity." He attributed the existence and extension of the disease in military life to its importation from home stations, to infection from civilians among whom it existed as an endemic, and to air and water containing the specific poison. He sums up his conclusions with the opinion that a disease of universal prevalence, occuring under widely varying conditions as to climate and habits of life, and yet retaining its individual character, must be due to the same specific cause. These observations on an extensive scale—occuring in military service—so strikeingly accord with the observations of medical men in agricultural districts, I feel justified in giving the history of a series of cases occurring in my own practice, introducing that, with a brief report from a friend in the interior of the State.

My friend, Dr. George A. Wells, a skillful practitioner of Galva, in this State, kindly sent me the following brief report: "On the 15th of August, 1883, he was called to see Mr. J. C. Swan, a young farmer, 23 years old, and found him suffering from typhoid fever. His mother being sick with dysentery, and having no help in the house, an aunt of the patient, living seven miles distant, came to their assistance. She arrived about the tenth day of the fever; thinking she could better do the washing for the family at her home, she moved all the clothing there, including bedding stained with fecal matter, and washed them. In a few days she was suddenly taken ill with fever, and at varying periods three other cases succumbed to the contagion. The sanitary surroundings at the home of the aunt were very bad; the water of the well was thought to be impure, and a large privy and hog yard was located near the well and dwelling house. There were members of other families, however, whose sanitary surroundings were equally as bad, as constant in their attendance on the young man, but they neither contracted the disease or conveyed its poison." The doctor expressed the opinion that the germs of disease were conveyed

in the soiled bedding, and found congenial soil for active development. The report concludes with the statement: "It is impossible to say where the germs were received in the case of the first patient, as he was traveling over the country with a threshing machine."

My own experience in a considerable practice, extending over twenty years, has convinced me that typhoid fever does not originate *de novo*. For nearly twenty years my practice was confined to country villages and farming districts, situations in which familiar acquaintance with individuals and their surroundings usually enabled me to trace the cases that came under my observation to sources of infection supplied by preëxisting cases. My first patient suffering from this disease was a resident of Chicago, who for three or four weeks previous to his attack, had been in the employment of a railway company and boarding at a village hotel in the interior of the State. There had been no cases of fever in the hotel previously, and for a year none in the village; he could give me no information as to its origin. My patient was taken ill on the 3d of December, 1863, and returned to Chicago late in the following month. The ordinary precautions as to disinfection were advised, but imperfectly observed. On the 3d of the following September, I was called to treat a case of typhoid fever in the family of the landlord of the hotel, and on the 23d of the same month assumed charge of another case. On the 9th of October, 1865, another case developed, and between that time and the 15th of December, I treated five cases. The next case developed in January, 1866, and was the last of a series directly traceable to the imported case of December, 1863. During the period covered by the history of these cases, the disease developed in a farming community six miles north of the village, but I had no opportunity to trace it to its source. From one of these cases, however, the disease was communicated to seven persons living in the village—all of whom were under my management.

In December, 1865, five cases occurred in a farmer's family, the first of which developed in a young man who had been engaged in watching a friend suffering from the disease in a distant neighborhood. The disease appeared in the four following cases in periods varying from eight to fifteen days. During the years 1867 to 1874, inclusive, I treated a large number of cases among Swedish and English immigrants, under circumstances unfavorable for tracing them to the initial case. Many of them gave histories indicating infection on the ocean, and many others occurred in the order so commonly observed, a single dwelling breeding typhoid fever for an entire season. During this period, I cannot recall an isolated case of the disease occurring in my practice. In October, 1878, in an entirely new field of practice, a case occurred in a farming community, in which I could obtain no history of a previous case later than 1870. The patient was brought to my office in a delirious condition, which, with other symptoms, enabled me to make a diagnosis. He resided with a brother-in-law a mile distant from his father's farmhouse. On the sixth day of his illness (the third after my interview), in the delirium of fever and in the night he struck across the fields and reached his father's residence. On my visit that day the family were apprised of the danger of infection. The dejections were ordered to be thrown into a pit and covered with fresh earth. Notwithstanding this precaution, seven persons became affected with the fever, in periods of six, ten, twelve, fourteen, eighteen, twenty-three and twenty-six days from the date of the reception of the first case in the family. Two of the patients were hired men, and leaving in the prodromic period of their illness, communicated it to three friends who attended them in a small village five miles distant.

This epidemic, occurring on a prairie farm, remote from the ordinary sources of contagion, in a neighborhood in which no recognized case of typhoid fever had occurred during eight years previously, stimulated my industry in the search for its origin. The patient first attacked made a business of threshing grain, and travelled over an extensive farming district. After his recovery, I questioned him closely in regard to previous disease in the families for whom he had worked. After diligent inquiry, it was ascertained that a short time previous to his illness, he had worked at a farmhouse in which a Swede immigrant had recently died of so-called inflammation of the bowels, *after an illness of three weeks*. In September, 1881, a young farmer contracted the disease in a grain-threshing tour which brought him in relation with families in which typho-malarial fever (?) had occurred the previous fall. During his illness, a friend living nine miles distant watched with him two or three nights, contracted the disease and communicated it to several members of his family, and they in turn developed a neighborhood epidemic.

In October, 1881, I treated four cases in a family, the fourth of which was a young lady but lately returned from a boarding-school in which the disease had lately existed. In the same month, in a family in which three cases occurred, I traced the infection to a tenement house on the farm in which a case occurred the previous winter. The brief history of these cases perhaps only possesses interest as cumulative evidence to that already existing in great abundance, that the disease has been properly classed by Libermeister as miasmatic contagious. I have never found in my practice the slightest evidence that it is directly contagious, but it has appeared conclusive that the excretæ of typhoid patients contain an exceedingly active disease germ, capable of propagating the disease to individuals susceptible to its influence. The period of time required to develop the germ, or morbific material, after its discharge from the body, will require the most patient investigation. In country practice the lack of skilled nurses, and the habit of changing attendants to suit the convenience of neighborhoods, is a fatal bar to successful inquiry. If bed linen is not frequently changed, and the anus and surrounding parts thoroughly cleansed on the occurrence of alvine discharges, disinfection of the bed-vessels and discharges will amount to nothing for statistical purposes. The neglect of this precaution in whole or part is the rule, not then the exception. The length of time during which the germs

will retain active vitality is another problem equally difficult of solution. It is apparently well established that they may retain their vitality for a year or more.

The cases recorded give but one of relapse. In that case there was no evidence of new infection. It was treated as a septicæmic fever. Five cases of latent character were observed presenting the unmistakable character of the disease, but lacking the nervous prostration and muscular weakness that prohibit gentle out-door exercise. These cases are not included in the preceding reports. In no instance have I observed a second attack of the disease in the same individual. It has appeared, however, that certain families are more than ordinarily susceptible to this and other zymotic diseases. The common remark that certain families are apt to take every prevailing disease, is confirmed by the observations of country practitioners, and stimulates inquiry as to whether or not diathetic conditions, hereditary or acquired, may not influence the extension of acute as well as chronic diseases. My observations do not sustain the Pettenkofer theory or the opposing English theory of the dissemination of the disease. Its virulence and prevalence were about equally observed in wet and dry seasons. Its prevalence has been apparently uninfluenced by habits of life, geological formation or topography of the country. Its prevalence in 1865 was preceded the previous year by that of ague in the creek bottoms and low valley lands, but the succeeding local typhoid epidemics did not occur in such localities during the 20 years of my practice in the country. I treated epidemics of small-pox, rubeola and scarlet fever, and experienced quite as much difficulty in tracing these diseases to their initial cases as I did in those of typhoid fever. The habits of country people in the care of the sick are influenced in no small degree by the ardor of their friendships, and their zeal in rendering service. To this fact we may partly attribute the greater relative prevalence of typhoid fever in country neighborhoods. Another cause consists, perhaps, in the difficulty in securing timely removal and disinfection of fecal discharges; in short, skilful nursing, which implies practical isolation of the patient, exemplary cleanliness, and thorough ventilation of the sick-room. During my observations of this disease, there has been a constantly growing conviction of the fact of its contagiousness by means of fecal germs, and this conviction has been strengthened by the failure of supporters of its *de novo* origin to instance facts to sustain that theory, corresponding with the experience of thousands of general practitioners through the rural districts.

The ætiology of the disease, including the study of the precise nature of the *materies morbi*, the length of time required to elaborate its active properties, either within or outside the body, how long the active properties can exist in fecal matter, and the circumstances under which these poisonous properties are longest preserved, and the manner in which the morbific material gains access to the human system, constitutes a series of the most intricate problems before the medical profession—problems which may require the best efforts of future generations to solve. The mortality resulting from the disease, and its uniformity under the various methods of treatment employed, is a painful reminder of the importance of studying the laws of its propagation, which, clearly ascertained, may enable us to place limits on its prevalence. We can then better afford to await the discovery of a specific for its cure.

MEDICAL PROGRESS.

MATERIA MEDICA AND THERAPEUTICS.

ON THE USE OF IRIDIN IN THE TREATMENT OF THE SICKNESS OF EARLY PREGNANCY.—Dr. D. Barry Hart, (*Edinburgh Clinical Journal*), recommends highly the following:

℞. Iridin.....gr. ij.
Cons. Ros.....9. S.
Fiat pilulæ, with talcs..iij.
Sig. One at night.

This must be followed in the morning by a draught of Friedrichshall water, a teaspoonful of the Carlsbad salts, or a doubly strong Seidlitz powder. Dr. Hart claims simply to apply the known views of Rutherford concerning the action of iridin upon the liver, as inducing a flow of bile, to a condition, pregnancy, that exerts an influence upon the liver, and in this way probably induces vomiting.

A HOSPITAL ELECTRICAL DEPARTMENT.—The last volume (XIX) of the Saint Bartholomew's Hospital Reports, gives an illustration with the descriptive text by W. E. Stevenson, M. B., of the electrical department of the hospital which it is proposed to establish. A lower floor is taken, which supplies a lobby with benches for patients in waiting, a work shop with an engineer's room communicating, and provided with a lathe, sink, shelves for chemicals, etc., etc.; and three warm, dry, commodious rooms with accommodations for dressing and undressing patients. These three rooms connect with each other, and their electric element boards are each connected with sixty modified Leclanché cells (in the cellar below), and are provided with a commutator, interrupter, rheostat, "on" and "off" shunt, galvanometer and induction coil. There are extra trays of six cells to work the coils. The Bunsen's battery for galvano-cautery is composed of six cells. In room No. 1, there will be a frictional machine for producing statical electricity, and an insulated couch and benches; also a small table for operating purposes, such as operations on nævi, circumcisions, etc. There will be an element board, and under this board a couch will be placed on which the patient can recline, and it will be possible to use the galvanic or faradic current at will. In room No. 2, will be a similar element board, worked in the same manner, but it will also be possible to use the current for the electric bath in the adjoining room. No. 3, the bath room. The portable batteries for use in the department and for lending to the wards, will also

be kept in this room, and also the electro-magnets belonging to the hospital. In the workshop all the minor repairs of the electrical apparatus used in the hospital will be carried out, and the man in charge will supply and receive the batteries used in the wards. He will also prepare the galvano-cautery batteries when they are required.

MEDICINE.

The Treatment of Partial Epilepsy by Encircling Blisters, with Transfer of the Aura.—Dr. Thomas Buzzard, in 1868, first called attention to this mode of treatment, and now (*Lancet*) gives a case to illustrate the success which he has met with in the past fifteen years. He considers this treatment as frequently of great service. In the majority of cases there is a distinct effect upon a number of the attacks, now and then stopping them altogether for considerable periods, and in other instances occasioning a very marked prolongation of the intervals between the seizures. On the physiological side, the strange influence exerted upon the site of the premonitory aura by the application of the blisters is very interesting. There has been a transfer (in the case given) of the aura from the right foot and leg first to the left foot, and later to the right groin. There is no marked uniformity in the mode of transfer in such cases. For example, in one patient a tickling in the left arm had always preceded the fit. After the application of a blister encircling this limb the tickling was transferred to the left leg. In another case characterized by a similar aura, the fits, as well as the tickling, ceased after the application of a ring of blister. In a third a sense of numbness in the left wrist was transferred to the right wrist. This was a case of cerebral tumor, as a subsequent autopsy showed. Another patient was a woman whose fits had always been preceded by cramp in the right hand, and who, after the blister, was affected with cramp in both hands before her fits. In the case of a patient whose fits had always been preceded by cramp in the left foot and shaking of it, with numbness of the left leg, a ring of blister was applied to this leg,and in subsequent attacks it was the right leg which became numb and shook. Tingling in the left arm was the aura in another case, and after blistering, a jerking of both arms and the left leg would take place at the beginning of a fit. Strangest perhaps of all was the case of a female patient whose attacks always commenced with cramp in the left hand. She had suffered from a severe fit two days before she came to the hospital, and the left hand then still remained quite powerless, as indeed she said was always the case after a fit. An encircling blister was applied to the left wrist. Next day the left hand had quite regained its power, but the patient complained that the right hand had *ipso facto* become weak. A few days later when she came to the hospital, the dynamometer showed 40° as the grasp of the left hand, and only 18° as that of the right.

Dr. Buzzard quotes an article by Professor Hirt, of Breslau, as corroborating his experience as regards both the therapeutical value of this method and the occurrence of transfer of the aura. In one case of unilateral convulsions without loss of consciousness, in which the attacks were exceedingly numerous every day, and always preceded by a tickling in the left arm, above which the blister was applied, the attacks ceased, and did not recur during the six months preceding the report. In a second case the aura was a trembling of the great toe of the right foot. Blistering was followed by cessation of attacks for two months, and in a fit which then occurred it was noticed that the trembling affected the big toe of the left foot. A third case is that of a shoemaker, in whom the cessation of attacks consequent on the treatment was attended by such feelings of discomfort as to cause him to regret his previous condition! In another example there was transfer of the aura, which consisted of over-tension of the fourth and fifth fingers of the left hand to the other side.

There would seem to be sufficient evidence to show that epileptiform convulsions beginning unilaterally depend upon a lesion of the cortex cerebri. As regards the situation of the centers which receive impressions of common sensation, we can do little more than infer that the place of reception for impressions coming from a skin covering the limb is probably in close association with the center for the movement of its muscles. If this be so, the irritation of a blister causing a molecular change, which is propagated centripetally, may be supposed capable of influencing in some way the liberation of movement.

As a matter of detail, a distinct advantage has shown itself in the blister being employed in the form of a ring or bracelet encircling the limb. An effect has been produced where the previous application of a quadrilateral blister has failed. A ring of blister applied above the ankles, involves cutaneous branches derived from the lumbar as well as the sacral plexus, through the anterior crural and sciatic nerves. A blister acting upon these nerves may be conceived, therefore, to be capable of producing a more intense impression than one which should only affect the branches derived from one or other of these large nerves. Professor Hirt employed blister of but half an inch in width, and it is very probable that a still narrower ring than this would be found sufficient.

The Purpura of Chloroform.—M. A. Moret Lavallie gives, in toe *Annnals de Dermatologie et de Syphiligraphie*, reference to three cases which demonstrate the possibility of the development of a purpuric eruption under the influence of inhalation of chloroform. In two of these cases the eruption was produced in identically the same manner, at the commencement of inhalation, in the course of one to two minutes, a discret eruption of purpuric spots, with a medium diameter of three to four millimetres, the blood being determined to them with such force as to transform several of them into sanguineous bullæ. The eruption did not seem to be about the hair follicles—in all three of the cases it occupied the same situation, that is about the middle of the body, and principally upon the anterior surface of the thorax.

Do these purpuras take rank among the medicinal purpuras, such as are produced by mercury, copaiba,

belladonna, ergot of rye and the preparations of iodine. The eruptions produced by these drugs only appear after the lapse of a certain time. Here we have an eruption appearing with the first inhalations of chloroform, the drug not having had time to impregnate the nervous system, it seems to belong to those purpuras which follow violent emotions, ranking among the nervous purpuras the chloroform acting by producing a brisk shock to the nervous system either by its anæsthetic or simple reflexation, due to the disagreeable impression felt by the patient, who is suddenly compelled to inhale vapors so irritating to the pharyngo-laryngeal and oculo-nasal mucous membranes.

The third case was a robust woman of 25 years, with facial eczema. She was chloroformed to open a deep abscess consecutive to a post-typhoid, costal periostitis. During the first inhalations the skin of the upper part of the chest became of a dull white, then it was covered by a series of large striæ, alternatively white and red. Immediately afterwards, here and there upon the chest appeared a cluster of purpuric spots, the cutaneous base of which had resumed its rosy color as soon as the spots were well defined.

THE PRACTICE OF MEDICINE IN BOMBAY.—Assistant-Surgeon Sakharam Argion L,M., gives (*Trans. of the Medical and Physical Society of Bombay*) an interesting sketch of the indigenous practice of medicine and the European practice of medicine in Bombay.

As regards the indigenous practice of medicine the Ayur Veda has in it the essentials of the Hindu system of medicine. The Hindu Vedas are the oldest written books known to the human family, and a record of what the Ayur Veda contains was known to the people long before it was put into writing, and was handed down from man to man by personal communication. On the Ayur Veda were founded the two subsequent works, Sushruta and Charaka, both written on an identical plan, the former treatise treating more of the subjects of surgery, and the latter those of medicine. A compendium of these was subsequently brought out at a later period by a learned physician and his grandson, known as the Vagbhatas. This is the standard work studied and referred to by the learned physicians of India at the present day. Besides this there are a number of others which treat of different special subjects. Of the fact that the Hindu system recognized the study of anatomy and physiology as essential preliminaries to the study of medicine one can easily satisfy himself by studying the original treatises Sushruta and Charaka; and the symptomatology that obtains therein does not materially differ from what one sees even in these days in a general treatise on medicine. Surgical and midwifery operations, the instruments therein required, and the mode of manufacturing them, have been described in detail. Rectal injection and enema syringes have also been described.

To have studied medicine systematically involved a full and elaborate preliminary literary course which extended over nearly twelve years. A special course of technical studies, when added to this, really made the man what he was then called, and amply deserved to be called, the Physician Royal. Under foreign rule, and lacking support, encouragement, and the proper institutions for the clinical study of diseases, he has died a natural death. He is no more to be seen; his place is taken by No. 2, the king of physicians. who has minor qualifications, is of mediocre proficiency in Sanskrit, and has a vague knowledge of diseases and their treatment. No. 3 is the ordinary practitioner of the country, who has emerged from a reciter of religious histories, a clerk or a schoolmaster, and in after life has associated himself with some senior man in actual practice, as a cook, an assistant, or an apprentice on stipulated terms. Sometimes he claims his descent from a renowned ancestor, and professes to be the possessor of his secrets, handed down through several generations. He is perfectly devoid of any knowledge of anatomy and of medicine. He professes to know the nature of the complaints of his patient by feeling his pulse, and pulse alone, and at times by the examination of the urine, which he conducts by dropping a litle oil in it. He ridicules English practitioners and their drugs by representing the former as having no knowledge of diseases as obtainable from the pulse, and the latter as injurious to constitutions of the natives of the country. No. 4 is the infant disease curer, who is closely allied to the common practitioner, but who has picked up a few English drugs in ordinary use and added them with advantage to his stock of native medicines. No. 5 represents the pretender, who advertises and sets up a great and pretentious display after the manner of European quacks. These five comprehend the Hindu system of practice, and are classed respec-ively Raja Vaidya, Vaidya Raja, Vaidya, Bal Vaidya and Dhongi Vaidya.

Then comes a modification of Hindu medicine, used by a class of practitioners ranking No. 6 in the order given by this writer, and called Hakeem (literally a philosopher). They follow the Greek system of medicine, and their medical literature is to be found in the Arabic and Persian languages. With them anatomy and physiology is not studied, as the Mahomedan religion objects to dissection of dead bodies. Their medicines are chiefly of vegetable origin, and poisonous drugs and metallic preparations, though mentioned, are not practically used, but in special cases lettuce, hyoscyamus and opium in small doses are used by some of them. They act on the principle of elimination, depression and stimulation in the treatment of diseases. They have a number of electuaries possessed of tonic and aphrodisiac properties, in the composition of which amber, ambergris, castor and musk enter largely. They also have their charlatans, who are called (No. 7) Waleying Hakeems.

These practitioners, be they Vaidya or Hakeems, sends their prescriptions to the (No. 8) Gandhee or drug vender, in the bazar, whose name taken literally signifies a seller of odoriferous substances. He, like some of his kind in other countries, sometimes, by frequently going over the list of drugs sent to him for dispensing, and questioning the bearers as to the nature of the complaints, becomes a practitioner himself, and is then (No. 9) the Gandhee practitioner.

According to this account of them they mnst be arrant rogues, for they deal in European drugs, by ordering the refuse of European produce and then adulterating it as much as possible to augment their profits.

The quack specialists form a large and curious class in this account, and fou individuals receive special mention, viz.: 1. The pile and fistula curer. 2. The ophthalmologist. 3. The dentist, and 4. the bone-setter. Piles are cured by the arsenical paste, and fistulæ are relieved by passing a silk thread through them, which has been besmeared with the same paste, and letting it cut its way out. The ophthalmologist pares thin films from leucomatous opacities of the cornea, and couches for cateract. The dentist knocks off by gentle hammering all loose and painful teeth, binds teeth with gold and silver wire, and inserts artificial teeth made of ivory, bone or conchshell. The bone-setter is the type of the old barber-surgeon. He cuts for stone by the median incision, extracts the dead fœtus by piecemeal, bleeds, cups and extracts the guinea worm. His wife is the ordinary midwife, who, in addition, does the work of a menial. He sets bones and shampoos sprained joints; from incautious and light bandaging gangrene of the injured parts has not unfrequently resulted.

An interesting class is that of the itinerant drug vendors; then comes alchemist, a religious person, whose medicines are costly and who cures loss of virility, barrenness, etc., and finally the Makoor, or dweller in the hills, possessed of marvellous secrets, whose patients come to him for relief.

The European practice of medicine first came to India through the advent of the Portuguese. It comprises the qualified practitioners, including Europeans and natives, and the field of action is being overcrowded through the increase in numbers by fresh yearly accessions from European and local universities. The unqualified practitioner, who has not passed his final examination, but practices on equal terms with his qualified brethren, except in his inability to grant certificates. Then come quacks and charlatans. As to homœopathy, a regnlar student practicing in Bombay is not to be seen at the present moment. A European foreigner practicing this system now and then puts in his appearance, and after a short time disappears. Quack followers have, however, established themselves, one of whom, a partner in a native firm of merchants, is a much boasted practitioner. He also practices mesmerism under the initiation of the American theosophists, and is said to heal dozens of people daily before he leaves for his regular work.

There is an association of vaidyas, chiefly composed of members described under classes 3, 4 and 5, and is called "A Society for the Investigation of Medicine as obtained from the Veda."

SURGERY.

An Improved Method of Adapting a Truss in all Forms of Hernia.—Thomas Bryant, F.R.C.S., in the *British Medical Journal* gives his views on the treatment of supposed irreducible hernia, as being that all herniæ, except those that have been subject to some antecedent strangulation, incarceration or obstruction, can be rendered reducible by treatment.

The means adopted to bring about this result are not complicated. They are the recumbent position, associated with limited diet, milk diet being the best, and the administration of small and repeated doses of saline purgatives, together with the local application of cold to the hernial protrusion by means of an ice-bag, or one of Leister's metallic coils. By these means the bowels are emptied of their contents, and the blood-vessels in their walls are rendered less turgid. The fat that may be in the omentum is likewise absorbed. This treatment, to be effectual, should be persisted in for days, and in some cases for weeks, and under it a good result may, with some confidence, be anticipated. Mr. Bryant, by this treatment, has succeeded, in from a few days to nine weeks, in reducing herniæ which had been down from five up to twelve weeks.

But it is his adaptation of a truss to the irreducible hernia that is particularly of interest. Having rendered the hernia as small as possible by rest, diet and the local application of cold, he takes a plaster of Paris "mould" of this hernia and the parts around its neck, and from this mould makes a "cast." Upon this cast a metal plate of tin or copper is moulded and covered with wash-leather, and when this has been efficiently made, as a result there is a pad which accurately fits the hernia, whether umbilical, femoral or inguinal, and this pad has only to be fixed to a spring or belt to make the instrument complete.

The pad, being a mould of the hernia, forms a most efficient protection to it; and touching, as it does, every point of the protrusion, it fairly guarantees no increase in its size; from like reason, the truss keeps its place, and is really comfortable to the wearer, since it presses equally. There is a little knack in taking this cast; all the hairs likely to be in the way must be snipped off, the tumor oiled, and dentists' plaster used by preference, as the commoner kind cracks and makes a mess. When plaster is not at hand for the mould, a piece of gutta-percha, dipped into hot water and softened, may be used for the purpose; and it is possible that this method may prove the most useful, since a hard mould is secured by this method, which is not likely to break.

Cardiac Tonics, Caffeine and Convallaria Majalis.—Dr. Beverly Robinson (*Therapeutic Gazette*, August 15; 1883) advances the claims of the above drugs, substantially as follows: 1. The diuretic action of caffeine is more marked than that of convallaria; digitalis is more powerful than either. 2. Convallaria is well borne by the stomach in the case of those suffering from chronic cardiac disorder, unless the uræmic condition has already commenced. 3. Cardiac power is increased by both drugs, but digitalis is more efficient than either. 4. Digitalis, for restoring the rhythm, is more certain than either caffeine or convallaria, and cumulative effects do not appear where the latter are continued for ten days or more.—*Bulletin.*

THE

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PUBLISHED WEEKLY.

THE EDITOR of this JOURNAL would be glad to receive any items of general interest in regard to local events, or matters that it is desirable to call to the attention of the profession. Letters written for publication or containing items of information, should be accompanied by the writer's full name and address, although not necessarily to be published. All communications in regard to editorial work should be addressed to the Editor

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SATURDAY, APRIL 12, 1884.

HOW TO BECOME A MEMBER OF THE AMERICAN MEDICAL ASSOCIATION.—We are again asked by subscribers who are not members of the Association, to state clearly how membership is to be obtained. We answer, that the chief and most desirable method is to first become a member of a regular medical society, if one exists, in the city or county where you live. If no city or county society exists in your county then go to the State Medical Society of your State and become a member of it. All State and local medical societies which have adopted or approved the Code of Ethics of the American Medical Association, are entitled to send *one delegate for every ten* of their regular members. It is easy for any member who will promise to attend a given meeting of the Association to get appointed as one of the delegates from the local or State society to which he may belong.

Having such appointment and a certificate of the fact from the secretary of the society he must actually attend an annual meeting of the National Association, present his certificate to the Registration Committee, sign the Regulations, pay the membership fee of $5, and be registered as a delegate. Having thus acquired membership by serving at one meeting as a delegate, he remains a *permanent member* so long as he pays into the treasury the *annual* membership fee and complies with the rules of the Association, and is entitled to receive the journal of the Association without any further charge. But if he neglects to pay his annual membership fee for three successive years he forfeits his membership. It was designed by the foregoing plan, first, to encourage the organization and maintenance of local and State medical societies, and second, to make the National Association, primarily, a true representative organization, uniting and harmonizing the society organizations of the profession in all the States and Territories of our country.

The only other mode of obtaining membership, is by attending an annual meeting of the Association, and, through the endorsement and recommendation of the Committee of Arrangements, obtaining an election by *unanimous* vote of the Association. The number admitted in this manner, by unanimous vote, is very small.

COLLECTIVE INVESTIGATION OF DISEASE.—At the last meeting of the National Association, a communication was presented from the committee of the British Medical Association, inviting the coöperation of the American Association in instituting parallel lines of investigation in this country. The subject was more fully explained, and a sample of the memoranda and blank cards used by the committee of the British Association, in the seventh number of Vol. 1 of this journal, August 25, 1883, pp. 216, 217, 218. The communication presented at the last meeting was referred to the standing committee on "Meteorological Conditions of the Atmosphere, and their Relations to the Prevalence of Acute Diseases," with instructions to report at the next meeting of the Association. That committee consists of Drs. N. S. Davis, of Chicago; J. M. Toner, of Washington; H. O. Marcy, of Boston; W. H. Geddings, of Aiken, S. C.; S. M. Bemis, of New Orleans; and H. D. Didima, of Syracuse, N. Y. The chairman of the committee requests each member to communicate to him, as early as possible, such views as he may entertain in regard to the report which should be made to the Association at the meeting now near at hand.

THE MEETING OF THE ASSOCIATION AND RAILROADS.—The Committee of Arrangements at Washington are completing terms with all railroads entering Washington for reduced fare for members who wish to attend the next meeting. For particular information on the subject, apply to Dr. D. W. Prentiss, of Washington, D. C.

PARTIES who wish for space for the exhibition of drugs, chemicals, instruments, etc. etc., should apply to Dr. D. C. Patterson, 919 I street, Washington, D. C.

SOCIETY PROCEEDINGS.

SUFFOLK DISTRICT MEDICAL SOCIETY.

SECTION FOR CLINICAL MEDICINE, PATHOLOGY, AND HYGIENE. ALBERT N. BLODGETT, M.D., SECRETARY.

(*Concluded from last week.*)

Dr. Ayer also asked, "Is the milk injured by churning, or motion, in transportation? My impression has been that the carriage and disturbance were injurious."

The gentleman replied that the printed rules of the Milk Association, posted in the barn or on the premises of the farmer, require every milk can to be full up to the stopper, so as to prevent all churning. It is also required that the cow's bag shall be washed or brushed before milking. The milk should be cooled in another building from that in which the milking is done, and should be kept in the stall no longer than absolutely necessary after being drawn from the cow. The cars used for the transportation of milk are placed on regular passenger trucks, and ride as easy as passenger cars. The motion of the car does not affect the milk at all. The wagons used for delivering the milk after it arrives in Boston are made for that especial purpose, and are set on two springs, and have a peculiar rolling motion which does not shake the milk. With all the care which can be exercised, the milk is injured far more in being carried about for distribution in the milk wagons after it arrives in Boston than it is in being carried thirty, or even forty miles by rail. Even if delivered in the best possible condition, careless treatment after it is in the consumer's house will spoil it in half an hour. Often it is placed where the temperature is raised to 60° or 70° F., when it at once sours, and the consumer blames the milkman.

Dr. Barnes asked if it is possible to preserve milk in good condition for seventy-two hours? to which it was replied that this was perfectly possible. A certain lot of milk was on one occasion missent, and for nearly a week was lost. When recovered the milk was in perfectly good condition in every way. The firm which the speaker represents, not milk contractors but milk dealers, supplies the line of steamships plying between Boston and Norfolk, Va. These steamers always take milk from here the round trip, as no supply can be depended upon in Norfolk. On their arrival in Boston after the trip to Norfolk the milk which is left over is always found fresh and sweet.

Dr. Buckingham stated that the quality of milk is often materially affected by circumstances entirely independent of the age of the milk or its transportation. As a matter of fact the inside of milk cans is sometimes foul, and the corks sour. One way of preventing this would be the use of glass, as proposed by Dr. Morris. By this system, however, one would get the milk of only one cow in a glass, which would be objectionable. The expense of this course, which might be important, is a matter of which he knew nothing.

Condensed milk having been brought into the discussion, he thought that the Swiss condensed milk, the only one of which he has knowledge, contains a great deal too much sugar to be a fit food for babies or invalids.

In answer to a question about the opinion of the Society as to the value of one cow's milk for babies, Dr. Buckingham said that the theory in giving one cow's milk is to avoid variation in the quality of the food. Milk from one cow does, however, vary somewhat from day to day, and it is probable that the mixture of the milk of several cows will vary less than that of any one of them. This he knew to be the opinion of several members of the Society. It is also the view that is gaining ground in Germany.

Dr. Harlow asked how many of the farmers probably adulterated milk to any extent or in any way before sending it to the city.

In reply it was stated that such a thing was very rarely done. Probably not over two per cent. of the farmers attempt to tamper with milk in any way. It would be fatal to their interests to do so, as the milk from such dairies would not be accepted by the contractor nor allowed to go out. The principal adulterators are a set of dealers who supply milk for a minimum price, and in this way build up a large trade in order to sell out. A well established milk route has a considerable commercial value. Unscrupulous men often build up a business in this way, and then sell the route to other parties.

Dr. E. T. Eastman stated that housekeepers often accuse the milkman unjustly. In a case known to him the servant was in the habit of taking off a portion from the top of the can, and supplying the deficiency with water, and the housekeeper complained that the milkman was delivering adulterated milk. This source of deterioration in the milk supplied to families is often forgotten, and the milkman is charged with adulteration.

In reply to the question how the supply of *cream* is obtained which is sold for table use at an advanced price, it was stated that the surplus of each day's milk was passed through a machine called the "separator," which removes the cream and leaves a pure skimmed milk which is sold to bakers, to families for domestic use, and for feeding to pigs. Another method of obtaining cream is also regularly followed. Each day cans of milk fresh from the dairy are poured into large receivers which are surrounded with ice, and are left undisturbed for twenty-two hours. At the end of this time it is skimmed with a conical skimmer, and about ten per cent. of cream obtained, which is the average amount in good milk.

Dr. Edes asked how the milkmen are sure of the quality of milk which they supply to their customers.

The reply was made that the quality of the milk is examined each day, and sometimes a favorite dairy will be found unfit for use, and will be rejected, and a supply from some other source obtained in its place. Suspicion was recently aroused in respect to a dairy, and on "setting" the milk it was found to

yield only six per cent. of cream. The milk from a neighboring dairy was also "set," and yielded fifteen per cent. of cream. Consumers would hardly have been satisfied if this milk had been delivered to them in glass jars sealed in the country, though they could not then accuse the milkman of tampering with it. Often the milk from a reliable dairy will be found sour, and, of course, must be rejected, and used for butter. The quality of the milk also depends on the food of the cow. Brewers' grains are not considered an unhealthy nutriment for cows, but the milk is thin and white.

In reply to a question by Dr. White as to how many cows are represented in one can of milk, it was stated that rarely would one can contain the milk of more than two cows. The farmer milks the cows in succession, and as soon as each cow is milked the milk is strained into the cans, which are successively filled and at once placed in water to cool. After arriving in the city the milk is mixed, and is then drawn into the service cans for distribution.

Dr. Bundy said that he had witnessed the operation of "mixing," and had seen water added in considerable quantities previous to filling the service cans for families.

Dr. Davenport asked if the milkmen consider the required standard too high? The reply was made that the milkmen in general know nothing about the standard, and but little about milk regulations or milk laws, but studiously endeavor to avoid the penalties.

The statement has been made that the cream sold by milkmen was obtained from creameries, as it was impossible to obtain good cream from the tops of their cans. Mr. Abbott stated that in his earlier experience as a milkman he found no difficulty in getting a large share of the cream, the motion of the cars was so slight, and the sudden cooling with ice caused the cream to rise so that most of the cans have a heavy cream on them when reaching the city. Those that did not could be iced and kept over, as nearly every milkman carries a surplus.

Dr. Barnes stated that the Milk Inspector, in speaking of the arduous duties of his office, said that if the city would furnish him with a team he could accomplish much more. Mr. Abbott produced the Milk Inspector's report for the year ending March 21, 1883, showing that the number of visits made and samples inspected was 1,153, or, allowing 300 working days, would be less than four per day, which Mr. Abbott thought, with our system of horse cars and good sidewalks, would not be a very laborious work for an able-bodied man. Our Milk Inspector receives $1,800 per year, and has a clerk at $500, making $2,300; divide this by 1,153, and it will be seen that it costs the city of Boston nearly $2 apiece for every sample of milk inspected. To this must be added $140 for analysis in fourteen cases, as a result of which thirteen persons were prosecuted and twelve convicted. In looking further, we find that at that date 860 store-keepers or retail dealers have been licensed. Is it possible that only that number of store-keepers in Boston have heard that there is a milk law? Such being the case, it is not to be wondered that the milk-dealers speak with contempt of the Milk Inspector and his office.

Dr. Marcy remarked that we should not forget that in the plan for furnishing milk as described and practiced by Dr. Morris, all chances of contamination of the milk from dirty vessels, all manipulation by middlemen, and all abstraction by servants after the milk has been delivered is prevented. The most of the objections urged against milk as now supplied, would at once be removed There seems to be no good reason why a plan which can be carried on in Philadelphia to the satisfaction of the consumer, and at a fair profit to the projector, might not work equally well in Boston.

Dr. Blodgett remarked that a part of the responsibility for adulterated milk undoubtedly rests upon the people consuming it. Very few people in the city know how pure milk looks, and expect a rich yellow milk at all times of the year and under all circumstances. Cow's milk is not all yellow, nor is it always yellow. The farmers endeavor to secure cows which will yield large amounts of milk, but the color is often very pale. The farmer gets three and a quarter cents a quart for milk, and he tries to get the largest possible amount from the cows. A farmer cannot furnish Jersey milk for three and a quarter cents per quart. If people demand a quality in milk which does not belong to it there are no doubt many milkmen who are willing to furnish it of any desired color; and thus the consumer unconsciously encourages adulteration.

Dr. Blodgett further stated that he had made some attempts to ascertain the methods employed in the handling of milk, and that he had seen and heard much which was new and interesting to him, and was particularly struck by the courtesy and freedom with which he had invariably been allowed to make any investigations or pursue any inquiries he thought desirable. He thought that the members of the Section would be favorably impressed with the care and scrupulous attention to cleanliness which are observed in all the operations to which milk is subjected in transit and until it is delivered to the milkmen for distribution. Of course all this does not in any way prevent these persons from adulterating it before they deliver it. But there seems to be no systematic adulteration, as we have too often been led to suppose. A visit to the large milk depots is calculated to inspire a greater degree of confidence in the quality of the milk supply than exists at present in the minds of the majority of consumers.

Dr. H. I. Bowditch then presented the following resolution:

Resolved, That the chairman be requested to appoint a committee of five, whose duty shall be to report upon the whole subject of the providing of milk for Boston, and suggest the means for obtaining it pure for the citizens.

The resolution was unanimously passed, and in accordance with its requirements the following committee was appointed: Dr. H. O. Marcy, chairman, Dr. A. N. Blodgett, Dr. E. W. Cushing, Dr. H. J. Barnes, Mr. L. F. Abbott.

On motion of Dr. Blodgett, the thanks of the Sec-

tion were tendered to the members of the Milk Producers Association for the important information which they have placed at the disposal of the Section in regard to the source, treatment, and adulterations of the milk supplied to the citizens of Boston.

The second paper of the evening was entitled

THE MILK SUPPLY OF BOSTON, AND THE BENEFIT TO BE DERIVED FROM THE SPAYING OF COWS,

by Mr. Lloyd F. Abbott, a former milk producer and dealer. The paper was read by Dr. G. E. Mecuen, who described the process as follows:—

As regards the spaying of cows there is little danger if properly done, and the mortality should not exceed one per cent.

Operation. An incision is made in the flank of the cow, left side preferred, as being handier for the operator, about four inches long, through the skin, then the muscles and fascia are cut, and the peritonæum divided, using the finger as a director. The hand is then introduced and carried upwards and backwards until the uterus is reached, when, by following the horn outwards, we find the ovary, and remove it with the thumb-nail or écraseur; this can be held by the two last fingers of the hand, and search made for the other ovary, and when found removed in the same manner; when the arm and hand are withdrawn and the wound stitched by the interrupted suture passing through all tissues except the peritonæum. During the whole operation a 20 per cent. solution of carbolic acid is used with the steam atomizer, the hands and side of the animal being thoroughly washed in the same solution. The hair should be clipped from the flank before incision. The pain from the operation is slight, the cow struggling only during the cutting of the skin, which does not take more than two or three seconds, and again during the sewing at the end of the operation. The latter is the most difficult part of the whole operation, as cow-hide in its undressed condition is very tough. While the arm and hand are within the belly of the cow the animal really seems to enjoy it, acting as a dog does when one rubs his head.

The advantages from this operation are set forth in Mr. Abbott's paper, and I will merely call special attention to a few of the most important. First, the quantity at a milking is increased, and a great increase takes place in the yearly yield of a cow. As to the milk itself, its quality is improved, the fat and sugar are increased, and although I did not keep a record of the examination of specimens of milk from these spayed cows before and after the operations (examining only for my own information, not expecting to have occasion to refer to figures again), I think that, judging from the large number of milk analysis that have been made, I would be supported in claiming that where fat and sugar are increased casein is decreased. Now this milk will be of the same quality day after day, unless the cow has some acute disease, provided she is properly fed and attended to. If over-fed she is apt to fatten, and fall off in the quantity of milk, as a spayed cow, like any animal deprived of the reproductive organs, is quite easy to fatten, thus adding to her value as beef. By this operation all the danger of abortion, post-partum hæmorrage, accidents during heat, while with the bull, and calving are eliminated. The bad breeding and small cows may be made good milk-producers, and easily fattened for market. But I suppose the greatest advantage of all is the escape of the periodical change occurring in the milk of the unspayed cows every three or four weeks, and lasting a day or two.

Cows are extensively spayed in Texas when young, simply for the purpose of making good beef cattle, the butchers at Brighton abattoir being well aware of the fact. Before operating I visited the abattoir several times for the purpose of becoming acquainted with this anatomy of the cow, and an inquiry at the various slaughter-houses "if they were going to kill a cow" would receive the answer "yes." On the cow being opened I would find only a rudimentary uterus and no ovaries. After examining several I asked the butcher "where the ovaries were." He informed me that they had been removed when the animal was young, and showed me the scar in the hide. The way he had of finding it was that the tissues were all fused together, it requiring care to separate the hide, and the use of the knife, while only his hand was necessary in other parts. It seems to me that this is proof that the operation is a safe one, for the stock-raiser would not run the risk of losing young cattle just for the sake of increasing the weight of a few.

There are two facts which are of interest to us as physicians, namely, first, for two or three days after the operation the flow of milk is reduced to almost nothing. I suppose this is due to the congestion of the broad ligament and tubes. Second, in one case operated on, miscarriage followed ten days after the operation, the calf being macerated so that the hair and skin readily peeled off.

I was present at the spaying of five cows by a veterinary surgeon in which the operation was done through an incision in the posterior and lateral side of the vagina, the surgeon using a speculum to fix the uterus and distend the vagina, then cutting and introducing the hand with an écraseur, and having engaged the ovary, removing it and the other through the same opening, the result being left to nature. From the slight observation I have had as yet, I would favor the flank operation.

Dr. James R. Chadwick said: I was called upon by Mr. Abbott to operate for him in one of his early cases. I did not find that my previous experience with the human species was of any material aid in the operation upon cows. I can testify that the operation appeared to give the cow but little pain, and only during the incision through the integument and its subsequent suture. The cow seemed to be chiefly affected by alarm at having her head and legs securely bound with ropes, but this no more than equaled our fear lest she would break loose during the operation and strike out. I was surprised on making the incision through the flank to find all further progress apparently barred by one of the stomachs; the hand was, however, easily passed between this and the abdominal wall into the pelvis, where the two ovaries were successively seized and torn off by the thumb

nail. But slight hæmorrhage resulted. The only real difficulty of the operation was in perforating the hide with a needle to close the integumental incision. This is readily appreciated by considering the difficulty that would be experienced in trying to sew up a rent in a cowhide boot. Waring assured me last year that the effect of spaying cows had been of great benefit in promoting lactation, and that the mortality was no greater than five or six deaths in a thousand operations.

Dr. Gilbert, of Dorchester, who has also witnessed the operation, said that the cow seemed to suffer no great pain, excepting when the outside skin was being cut, and when the stitches were inserted, at the close of the operation. The risk and discomfort of ether are much greater than the pain of the operation.

Dr. Mecuen stated that one cow from which the ovaries were removed has produced milk continuously for eleven years, and in this entire period has fallen off only three pints. Dr. Brush claims that the amount of milk will remain the same during the life of the animal. The carbolic spray was employed in all cases except the first one. On opening the peritonæum the air rushes into the abdominal cavity, but seems to produce no injurious effects. Both ovaries are removed at once. No dressing other than some substance to protect from flies, etc., is necessary, and the wound is entirely healed by first intention in about a week. The animal should be kept on low diet for a day or two, but in three or four days is allowed to run in the pasture as usual. In one case the cow was five months pregnant. The operation produced a miscarriage at the end of ten days. The fruit was macerated. After spaying, the only condition which will cause the quantity or quality of the milk to undergo variation, is sickness of the animal.

Dr. E. W. Cushing stated that there is always an infant in his house. He has used the milk from a spayed cow for more than a year, and finds it to be a good product and of uniform quality. New milk (after calving) is not good for children, and the milk during menstruation is not wholesome for an infant. Cows and women are much alike in this respect. The milk taken from a pregnant cow is unwholesome for a delicate person, and no mother thinks of nursing her child after she has again become with child. Milk as we obtain it is often neither natural nor healthy, for no animal in a natural condition gives milk while she is carrying her young.

On motion of Dr. Marcy, a vote of thanks was tendered Mr. Abbott for his description of a safe operation, whereby the quality of milk supply may be materially improved and its quantity rendered constant for many years.

Adjourned at 11 o'clock.

OBSTETRICAL SOCIETY OF PHILADELPHIA.

Stated meeting, Thursday, April 3, 1884. The President, R. A. Cleemann, M.D., in the chair. Dr. Cleemann made some remarks on the subject of

DIGITAL DILATATION OF THE OS UTERI DURING LABOR.

He had been taught not to dilate or stretch the os uteri with the finger, and for years this early teaching deterred him from making any attempt to supplement the contractile powers of the uterus by assisting in the process of dilating the os. Some time since he was called to attend a primipara. The waters had been discharged the previous day. The pains had continued, but the os uteri was very small and the cervical rim hard and unyielding. He felt called upon to interfere actively, and tried to dilate the os with his finger. It softened rapidly, and in half an hour was sufficiently dilated to allow the head to pass, and delivery rapidly followed. Since that occasion he has tried the same procedure in several cases, and always with gratifying results, the labors being brought to rapid terminations where previously hours had been wasted in weary and painful waiting.

The irritable condition of the os which had been lectured upon as the consequence of such interference has not been experienced; no injury has resulted in any case. The soft finger can do no more harm, if clean, than a Barnes' or other form of dilator, and there is no danger, as in the case of the latter, of pushing the head aside and converting a vertex into a shoulder or other faulty presentation.

Dr. W. T. Taylor, since he had dared to deviate from the teaching of Professor Hodge, had used his finger to assist the dilatation of the os. He did not do so if the cervix was irritable or its edge wiry.

Dr. Githens had practiced digital dilatation of the os uteri throughout his obstetrical practice, a period of eighteen years. He does not confine it to any class of cases, nor does he wait until after the membranes are ruptured. In any or all cases he finds that a "pain" is accompanied by a contraction of the circular muscular fibers of the cervix, as well as by a contraction of the longitudinal fibers of the body of the uterus. The contraction of the circular fibers retards the progress of the labor. The intention of the digital distension is to paralyze these circular fibers and thus favor the dilatation of the os. In practice this effect is rapidly produced. One or two fingers are swept around the inside of the cervix, the pulp of the finger being next the cervix, and the latter is pulled away from the head. This operation is kept up during the interval between pains; when the pain occurs the finger is withdrawn, and the operation is repeated in the next interval. The membranes are not ruptured by this process. The irritable condition of the os, if such exists, is subdued. If the rim of the cervix is wiry and thin, or hard and thick, it softens and yields. The cervix and vagina, if hot and unyielding, at first become cool and pliant; cervical tears are almost entirely avoided, and the time, pain and exhaustion of the labor are reduced to a minimum. The process is useful in every case of labor throughout the first stage.

Dr. Philip M. Schiedt practices digital dilatation largely. His patients say they recognize the assistance it gives them, and in subsequent labors ask the

doctor to help them. By the great shortening of the first stage of labor resulting from this method the use of the forceps is frequently avoided.

Dr. Parvin would be sorry to see digital dilatation adopted as a rule for all cases. He thinks it shortens labor by increasing the uterine contractions, and not by dilating the os. Voluntary efforts at bearing down are not needed during the first stage; they are dangerous rather than helpful. The method may be useful in some cases after the rupture of the membranes, which is the natural dilating agent. There is also danger of septicæmia from germs on the fingers. He does not think the fingers so good a dilator as Barnes' dilator, because they do not press equally on all sides of the os, but only on one point at a time, and thus cause an unequal thinning with danger of laceration. He thought the danger of a change of presentation by the use of Barnes' dilator very slight. He would prefer a mechanical dilator to the finger whenever dilatation was necessary, but thought something ought to be left to nature. Any sort of interference carries a possibility of danger.

Dr. Elliott Richardson thought there was a possible danger of rupturing the membranes. Our authorities caution us about the introduction of the finger into the uterus, and the too early rupture of the membranes.

Dr. Harris remarked that one point had been overlooked. Why does the os not dilate easily when the head is the dilating agent? It is because it is a round surface over which the cervix does not slide easily. On the contrary, the finger is applied at successive points. One benefit of the method is that any change or danger is at once detected. The method should not be used indiscriminately, and we should not interfere unnecessarily.

Dr. Cleemann would not recommend the method in every case of labor. He has resorted to it in cases where there has been early rupture of the membranes, and the assistance of the bag of waters has been lost. In a recent case he had saved a patient hours of suffering, and the os was not bruised or injured in any way. The sight of any instrument causes the patient much anxiety, and the exhibition of the Barnes dilator, and the water, syringe, etc., cause nervous excitement. The bags sometimes burst, and thus give the patient a terrible shock, with the added discomfort of the escaping water or air. He has always carried them, but does not like to use them.

EXANTHEMATOUS DISORDERS IN THE PUERPERAL STATE.

Dr. Parvin had recently an experience of the invasion of measles and scarlet fever in the obstetric ward of the Philadelphia Hospital. In the first case in which measles occurred, he did not think that the full term of pregnancy had been reached. Authorities state that premature labor is usually caused, a result of the high temperature of the exanthematous fever. One patient had septicæmia in addition, but recovered. The infants were not affected. In one case, soon after labor, the temperature rose to 103°, and the patient was sent to the fever ward. At the second visit a slight rash was observed, which subsequently proved to be scarlatina. Desquamation was very abundant; albuminuria was very marked on the tenth day; rheumatic pains were also felt. The patient recovered. The child remained well. Children have been born with the measles, but he did not know of such an experience with scarlet fever.

Dr. W. T. Taylor, some 15 or 20 years ago, had reported in *American Journal Medical Sciences*, 1853, a case of congenital small-pox. The mother had some febrile symptoms and pain in the back, and the child had the disease, being marked with pits. He had a case of scarlet fever in a mother two days after labor. It proved fatal in two days. The child lived.

Dr. Harris remarked that in the reports of the Rotunda Maternity Hospital, in Dublin, are a number of interesting reports on complications of the puerperal period by exanthematous fevers. Their mortality has been very materially influenced by these epidemics. Erysipelas is the most interesting and most fatal of these complications. In some cases it resembles septic poisoning.

W. H. H. Githens,
Secretary.

FOREIGN CORRESPONDENCE.

London, March, 1884.

Some of your readers who have been present at the annual meetings of the British Medical Association, may have noticed Dr. Price, of South Wales, who considers himself the nineteenth century representative of the ancient Druids; he always dressed in green trousers and a sort of white smock coat, with a fox's skin by way of head covering. It appears cremation was the Druidical means of disposing of the dead. Some weeks ago the neighborhood of Dr. Price's residence was startled one evening by the reflection of a fire on a hill-top near. Upon closer investigation it appeared the doctor was engaged burning the body of his child in a cask of petroleum. After a scene of excitement the charred remains were rescued, and eventually the exponent of Druidism was arraigned before Lord Justice Stephen at the winter assizes at Cardiff. His lordship, after discussing at length the disposal of dead in ancient Europe, ruled that there was no law, old or modern, that rendered the burning of a body illegal, provided it be done in such a manner as to cause no nuisance. The ruling in this case will, no doubt, give impetus to those who are advocates of cremation in this island.

In the last report sent by the German cholera commission, who have gone from Egypt to Calcutta, it is stated Dr. Koch has really discovered a special cholera bacillus, and that he found the water supplied to some patients was teeming with bacilli identical with those found in cholera subjects. Professor Cohn, writing to one of our journals from Breslau, calls attention to the circumstance that just 200 years ago

there was made in the Netherlands a scientific discovery of the greatest importance. In the year 1683 Leeuwenhoek gave notice to our Royal Society that by the aid of his microscope he had detected in the white substance adhering to his teeth "very little animals moving in a very lively fashion." These, says Professor Cohn, were the first bacteria which the human eye ever saw. The descriptions and drawings given by this first observer are so correct, that the organisms drawn by the hand of Leeuwenhoek can be easily recognized and compared with their fellows of to-day.

Mr. Lennox Brown, F. R. C. S., has been investigating the latest idea of the "artificial Italian air" which was mentioned in a former letter. In an able paper read before the society for the encouragement of the fine arts, he declared that peroxide of hydrogen had not been shown to be beneficial; while of the two ingredients with which it was mixed, ammonia was a most poisonous gas, and peppermint was useless. Mr. Brown earnestly advised those who were vocalists not to try the idea with a view of strengthening and improving their voices until more was known of its merits. A statement has just been published showing the deaths which occurred from the use of anæsthetics in surgical operations during last year in the United Kingdom. Only nine are reported to have occurred from this cause in 1883, the number in 1882 having been twenty-eight, and in 1881 fifteen. In many of these cases the fatal result may fairly be considered to be due not to the anæsthetic, but to the operation. In Leeds chloroform was used in over nine thousand cases without a single mischance. With regard to nitrous oxide, it may be said that the risk from it was almost *nil*, for a series of more than twenty thousand operations are recorded in which there was not a single untoward result. One death was caused by it in the Dental Hospital, Leicester Square, in a case where the patient had a serious complication of diseases. It is however, to be feared that the growing practice, especially among dentists, of administering it single handed, will be productive of mischief. It is suggested that the theory and practice of anæsthetics should be more thoroughly taught in our medical schools, and that as a special certificate is given by an expert to qualify a medical practitioner for performing the very simple operation of vaccination, it might be as well to apply at least an equal test to the student's knowledge of sending his patient into a state of insensibility.

A deputation of medical men have just waited upon the Bradford School Board and presented a memorial signed by most of the doctors of the town, praying the board to dispense with "home lessons" so far as regards children under ten years of age. Dr. Rabaglish said that the returns of the Register-General showed the extraordinary fact that since the Compulsory Education Act came into force, the deaths from cerebral effusion amongst children of school age had increased by 20 per cent., and from inflammation of the brain by 50 per cent.

At the Cambridge Medical Society a case was shown of division of the median and ulnar nerves treated by sutures. The wound, which was rather lacerated, divided the ulnar artery, the superficial flexor tendons, and the ulnar and median nerves—the former was tied; the nerves were sutured with fine catgut. On the fourth day after the operation sensation returned in the parts supplied by the injured nerves, and though the wound did badly, and there was both great constitutional disturbance and diffuse cellular inflammation of the fore-arm, yet the union of the nerves never seemed to be disturbed. The patient was produced, and it was seen there was some wasting of the muscles of the thumb, and contraction of the fingers, but that sensation was perfect. The patient could tell which finger was touched, and what part of it. The only inconvenience he experienced was a curious sensation of numbness in parts supplied by median nerve, which was most apparent in cold weather, and on one occasion he suffered from a bullous eruption on the index finger, having incautiously exposed it to the cold.

The London Medical Society had an interesting paper read by Dr. W. H. Corfield upon the diseases resulting from the pollution of the air through defective house sanitation. He considered the fault was more frequently due to dishonest workmanship than faulty design. The chief sources of danger were the common ones of direct communication with the main drain. He mentioned cases where foul air had been conducted from the basement all over a house by means of the bell wires. Enteric fever he looked upon as usually caused by drinking foul water, rarely by inhaling foul air. Diphtheria, however, was caused most frequently by breathing foul air. G. O. M.

SPECIAL NOTICES.

TO THE MEMBERS OF THE AMERICAN MEDICAL ASSOCIATION WHO LIMIT THEIR PRACTICE TO DISEASES OF THE EYE, EAR AND THROAT:

The Secretary of the Section of Ophthalmology, Otology and Laryngology desires to say that owing to a misunderstanding of his duties, no invitations have been sent to any member of the profession to prepare papers for the coming meeting of the Association on the above-named diseases.

He now most earnestly solicits voluntary productions and hopes that all who see this notice, and have the success of this Section at heart will consider themselves personally appealed to. It may possibly be urged that the time is too short. On the contrary it is ample. Please send in the titles of papers now, and write up the subjects afterwards. If the gentlemen to whom this is addressed will kindly take the matter in hand one of the most successful meetings ever experienced will be the result. Prolixity (the bane of nearly all medical societies) will necessarily be avoided, and instead of fancying ourselves in the halls of Somnus, we shall be actively engaged in the elysian realms of the most delightful discussions known to the profession since the foundation of this Association.

Do send in the titles of papers, we beg of you, and make this seeming defeat (caused by your secretary's misunderstanding) a glorious victory. No one, or two, or three dozen are invited to the exclusion of others, but all. Let it not be a failure.

Please send the titles to Dr. J. L. Thompson, 22 W. Ohio street, Indianapolis, or to Dr. D. W. Prentiss, Washington, D. C.

J. L. THOMPSON,
Indianapolis.

THE ASSOCIATION OF AMERICAN MEDICAL EDITORS. ANNUAL MEETING, WASHINGTON, D. C., MAY 5, 1884.

The annual meeting of the Association of American Medical Editors will be held in Washington, May 5, at 8 P. M., in Medical Hall, southeast corner of Sixth and F streets.

The annual address will be delivered by President Leartus Connor, M.D., on "The American Medical Journal of the Future, as Indicated by the History of American Medical Journals in the Past."

Dr. N. S. Davis will open the discussion on "How far can Legislation Aid in Elevating the Standard of Medical Education in this Country?" In which Dr. A. B. Palmer, Dr. Henry O. Marcy, Dr. L. S. McMurtry, Dr. C. H. Hughes, Dr. Frank Woodbury, Dr. William Brodie, Dr. A. N. Bell, Dr. Wm. B. Atkinson, Dr. W. C. Wile, Dr. W. R. D. Blackwood, Dr. Henry Leffmann and Dr. Deering J. Roberts will take part.

All members of the profession, especially journalists and authors, are invited to be present and take part in the meeting.

JOHN V. SHOEMAKER, Secretary.
Philadelphia, 1031 Walnut street.

STATE MEDICAL SOCIETY OF ARKANSAS.

DEAR DOCTOR:

The ninth annual session will be held at Little Rock, on Wednesday, April 30, Thursday, May 1, and Friday, May 2, 1884, commencing at 10 A. M. on Wednesday.

You are earnestly urged to be present and to induce others to join with us in the work of advancing legitimate medicine.

Each county or municipal society shall be entitled to one delegate for every five members, and one for a fraction over five.

"The several committees shall report annually, through their Chairman, respectively, upon the specific subjects to which they have been appointed. It shall be the duty of each committee to make a full and complete report to the society of all matters, business, etc., that properly comes before or presents itself to them upon each particular branch or section." Art. IX., Sec. 2, Constitution.

L. P. GIBSON, M.D., Secretary.
Little Rock, March 20, 1884.

POLITZER treats aural polypi by instilling alcohol several times daily. It must be warm, and shrinking occurs in a few weeks.—*Wiener Med. Blatter.*

MISCELLANEOUS.

LIST OF CHANGES IN THE MEDICAL CORPS OF THE NAVY, DURING THE WEEK ENDING APRIL 5, 1884.

Medical Director P. S. Wales, granted one year's leave of absence from March 28, with permission to leave United States.

Medical Inspector N. L. Bates, ordered to Washington to attend sick officers.

Medical Inspector M. Bradley, ordered to continue duty at League Island Navy Yard.

Assistant Surgeon H. W. Whitaker, ordered to naval rendezvous at Philadelphia, Pa.

Surgeon-General F. M. Gunnell, appointed Chief of Bureau of Medicine and Surgery and Surgeon-General of the Navy, with the relative rank of Commodore, from March 27.

P. A. Surgeon C. W. Rush, ordered to Naval Academy.

Surgeon D. McMurtrie, detached from naval rendezvous, Philadelphia, and to await orders for duty at Navy Yard, Washington, D. C.

Medical Inspector H. C. Nelson, ordered before Retiring Board.

Medical Inspector A. C Gorgas, to be Medical Director from the 4th March, on the active list.

OFFICIAL LIST OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT UNITED STATES ARMY, FROM MARCH 29, 1884, TO APRIL 4, 1884.

Mearns, Edgar A., First Lieutenant and Assistant Surgeon, assigned to duty at Fort Verde, A. T. (Par. 1, S. O. 22, Headquarters Department of Arizona, March 19, 1884.)

White, Robert H., Captain and Assistant Surgeon, to be relieved from duty at U. S. Military Academy, West Point, N. Y., Aug. 28, 1884. (Par. 7, S. O. 74, A. G. O., March 31, 1884.)

Woodhull, Alfred A., Major and Surgeon, granted leave of absence for twenty-two days, to take effect about April 6, 1884. (Par. 13, S. O. 72, A. G. O., March 28, 1884.)

NEW BOOKS.

Rothe, C. G. Die Diphtherie. Ihre Entstehung, Verhütung u. Behandlung. 8vo. 90 pp. Leipzig: Abel.

Rüdinger, N. Zur Anatomie der Prostata d. Uterus masculinus u. d. Ductus ejaculatorii Beim Menschen. Mit 3 Tafl. in Farbendr. 8vo 23 pp. München: Rieger.

Schech, Ph. Die Erkrankungen der Nebenhöhlen der Nase u. ihre Behandlung. 8vo. 19 pp. München: Rieger.

Stintzina, Roderich. Beitrag zur Anwendung des Arsenicks bei chronischen Lungenleiden, insbesondere bei der Lungentuberkulose. 8vo. 29 pp. München: Rieger.

Voit, Carl. Ueber die Ursachen der Fettablagerung im Thierkörper. 8vo. 23 pp. München: Rieger.

Wachsmuth, G. F. Diphtheritis. 4 Auflg. 8vo. 26 pp. Leipzig: Urban.

Weismann, Aug. Ueb. Leben u. Tod. Eine biblogr. Untersuchg. Mit 2 holzchmitten. 8vo. iv. 85 pp. Jena: Fischer.

Wertheimher, Aug Zur Behandlung der Eklampsia infantum. 8vo. 17 pp. München: Rieger.

Wölfler, Ant. Ueb. die Entwickelung u. den Band kropfes. Mit 19 lith. Taf. 8vo. 210 pp. Berlin: Hirschwald.

Croom, J. H. A Study of the Bladder during Parturition. 4to. 70 pp. London: Hamilton. 6s.

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ORIGINAL ARTICLES.

HYDRONEPHROSIS.

AN ESSAY BASED UPON THE COMPARATIVE STUDY OF SEVENTY-ONE CASES OF THAT LESION, OF WHICH ONE CASE CAME UNDER THE PERSONAL OBSERVATION OF THE WRITER.

BY GEO. A. STAPLES, DUBUQUE, IOWA, A.B., M.D.

(*Continued from last week.*)

In the opinion of Prof. Simon[1] the methods for obliteration of the cyst have not yet arrived at a satisfactory value in surgery; though, rightly performed they might work wonders; the reason being that only those tumors are adapted for obliteration whose walls are somewhat shrunken and whose contents could be gradually dried up. This state of things exists in some unilocular ovarian cysts, but exists rarely. These methods may be grouped into two divisions: first, the cyst is to be emptied, air being carefully excluded; second, air being admitted and suppuration induced, it is to be carefully drained.

Examples of the first variety are puncture without leaving in a canula, and puncture followed by the injection of a medicated fluid, such as iodine. By the former plan the vessels that course in the shrunken walls are intended to be so compressed as to abolish their function. By the latter a moderate inflammation, not leading to suppuration, but only so far as to destroy the secreting activity of the cyst or create adhesions, is aimed at.

The single puncture, effected by means of a small trocar or Dieulafoy aspirator, is the least dangerous procedure and only by frequent repetition excites inflammation. Prof. Czerny declares that it is "absolutely void of danger." M. Lecorché[2] advises that the puncture be made anteriorly, in the eleventh intercostal space, carefully avoiding injury to the peritoneum or intestine.

Dr. Cabot[3] advocates in hydronephrosis of recent origin, especially when dependent on traumatic causes, that aspiration or lumbar incision be practiced, asserting that the relief from pressure will allow the ureter to recover its caliber, and, if fever and other unpleasant symptoms do not follow, that the operation be repeated a number of times, one case of recovery after eight aspirations being reported. Regularly, however, relapses demanding more decisive measures are to be expected.

In the second of the three tables collated by the writer are shown seventeen cases treated by this general method of puncture. Of these seventeen cases eleven died, in three instances temporary relief was obtained, and in three a cure was effected. One[1] of the cases in which relief was obtained through aspiration and adjuvant treatment was observed by the writer, and as it presents some unique points of interest, is related in full.

Mrs. M., of German descent and aged forty years, first consulted Dr. G. M. Staples, of Dubuque, Iowa, on May 17, 1881. She was of strong build, free from any œdema, even somewhat thin, and in early life had been a clerk in a store, but had married happily, borne five children, and now lives in comfortable circumstances. Her family history as to health was good.

In 1861, when about twenty years of age, she first began to experience a feeling of uneasiness in the left latero-lumbar region, suffering in addition from a "heavy feeling of sleepiness," with a sense of expansion in the left hypochondrium. As the expansion increased there were added nausea and vomiting, with intense pain, and a fluctuating tumor was soon discernible. The patient was thus first attacked at a ball, after dancing once or twice, and had to be taken home, supposing she had caught a severe cold. Since that time these spells came on with tolerable regularity every two to four weeks, but had no connection with the menses, which were perfectly regular.

The patient when first seen was laboring under an unusually severe attack that was complicated by new and alarming signs of prostration, the pain being very acute, though unaccompanied by rigors. It was chiefly located in the left loin, where it was most severe, but it also radiated toward the left groin and rendered flexing of the thighs painful. The patient stated that these spells lasted generally thirty-six to forty-eight hours and obliged her to go to bed and have fomentations applied, that the attacks were characterized by an almost perfect periodicity, the longest interval ever experienced of freedom from them being seven, the shortest about two weeks.

Although never troubled by colic or other renal difficulty, exposure of any kind or a strong emotion is capable of bringing on a spell, and a tumor, tender

[1] Simon, loc. cit., p. 222.
[2] Lecorché, loc. cit. See, however, Labadie-Lagrave, loc. cit.
[3] Cabot, Boston *Med. and Surg. Journal*, Feb. 22, 1883.

[1] Case XLIX.

on pressure, is soon felt, the more severe symptoms supervening later.

The attack may subside gradually, but oftener it ceases suddenly, and, in either event, relief is coincident with the passage of an increased quantity of urine, giving rise, to use her own words, to the "sensation of something giving way," and marking the disappearance of the tumor. The urine evacuated is of a light color, but on the next day becomes darker and has rarely contained a brick-dust sediment. There has never been hæmaturia, nor has the urine ever contained pus. The affection has always been unilateral.

The affection had been diagnosed by various physicians in St. Paul, St. Louis and Dubuque as tumor of the spleen, phantom tumor, etc. No therapy advised had been of service. Dr. Staples diagnosed hydronephrosis, but his opinion was not sustained by any other surgeon consulted.

On Oct. 28, 1881, Dr. Staples was again called to see the patient, who was suffering from a protracted and unusually severe attack that had already lasted eight days. The same diagnosis was made and aspiration advised. Consent was given after eleven days of suffering, and, on Nov. 1, a No. 2 needle of Codman and Shurtleff's aspirator was thrust into the tumor at the upper part of the left lumbar region, and forty-four ounces of a clear amber-colored fluid, that had the odor and characteristics of urine, were drawn off.

On examination of the fluid it was found to possess a specific gravity of 1010 and a faint alkaline reaction. Fehling's test did not reveal sugar, nor was albumen detected. After concentration of a small portion of the fluid and the addition of nitric acid a few crystals of nitrate of urea were deposited.

The patient was again aspirated on April 20, 1882, and thirty-nine ounces evacuated; and a third time on July 17, 1882, when thirty-seven ounces were obtained. In the former instance the tumor had existed eight and in the latter seven days. On each occasion the patient was about the next day.

In the operation the needle was pushed upward and inward from three and a half to four inches. As the cyst grew smaller its wall, which was quite tough, as the flow of the fluid ceased, was felt to slip away from the instrument with a contractile sensation.

It is proper to add that the increased flow of urine after a "spell" had not been noticed until Dr. Staples called attention to the fact by his inquiries.

About the middle of October, 1882, another protracted attack came on, and the use of the aspirator was urged. Cataplasms of stramonium leaves were ordered instead, and relieved her in a few hours. A like result has attended their use since, and it is hoped that a remedy to take the place of aspiration has now been found. The patient has learned to employ the hypodermic syringe when the pain is unbearable.

Later therapy has consisted in the use of antiperiodics and diuretics, the exhibition of iodide of potassium and extract of stramonium in the intervals between the attacks with the result of much lessening their frequency and abating their severity.

*The etiology of this case is doubtful. It is not believed, however, that the cause is to be ascribed to calculi or any mechanical obstruction, as the most careful and repeated examinations of the urine have failed to show any evidence of stone, and there never has been any renal colic.

The hypothesis is advanced that the true cause is a nervous irritability of the ureter, producing a stricture near the ostium pelvicum. Regularly the ureter would relax when the fluid in the pelvis increases, so as to produce great pressure from above, and, at the time when aspiration was necessary, it is also believed that an invagination or intussusception of the ureter had taken place.

This hypothesis is stated with diffidence, as no author seen by the writer, in treating of the ætiology of hydronephrosis, has mentioned it, but it is not difficult to imagine that, as the tumor, by reason of a protracted spasm, extended downward as well as laterally, the ureter must either double in upon itself or yield in some manner, thereby making a permanent or fatal trouble were the cyst not emptied artificially.

In support of this theory, it may be mentioned that analogous strictures have been observed in retention of urine from spasmodic contraction of the muscular fibers of the sphincter vesicæ, in asthma from spasm of the bronchial muscles, and in spasmodic stricture of the urethra. It is also known[1] that where a moderate urethral stricture or an enlarged prostate exists there may be ordinarily a sufficiently free passage for the urine, but occasionally the bladder becomes overdistended, and complete retention is the result. In such cases the urethra again becomes permeable when by aspiration or puncture the urine is drawn off and the pressure relieved.

The writer has been unable to find accounts of cases bearing close analogy to the above. Dr. W. West,[2] however, has recorded a case in an unmarried woman where there were attacks of acute pain from this cause more or less synchronous with the menses, and in addition a very much disturbed menstrual function and leucorrhœa.

The above case would seem to bear out the opinion of Prof. Czerny that "the single puncture with the Dieulafoy aspirator, under antiseptic measures, is absolutely void of danger." Indeed, the belief that puncture was dangerous was formed at a time when antiseptic methods had not been perfected. The results, as shown by the table, are certainly such as would warrant a persevering trial of a comparatively innocent therapeutic measure, the facts being that in 17 per cent. of the cases tried it was competent to effect a cure, and in 35 per cent. to effect decided improvement.

The injection of medicated fluids, as iodine, has proved futile and is dangerous, for if any of the fluid pass into the abdominal cavity, diffuse peritonitis will result, and even with the greatest care there is much

* Since the preparation of this paper Mrs. M. was aspirated for the fourth time by Dr. Staples, assisted by Dr. Parke W. Hewins, and 55 ounces of fluid drawn off. The patient had over-exerted herself, neglected to employ any therapeutic measures, and, when seen, was largely distended in her left latero-lumbar region. Up to that time her general health had continued good, with little trouble from the kidney; since the last operation she has been perfectly well.

[1] Cabot, loc. cit.

[2] W. West, *Amer. Med. Weekly*, Nov. 14, 1882.

probability that it will induce suppurative inflammation in the sac. In no case on record has this treatment been successful.[1]

The second general method of surgically treating hydronephrosis is by nephrotomy and open treatment of the wound. As the cyst is daily syringed out, its walls through shrinkage and formation of granulations become converted into cicatricial tissue. This method is applicable to all cysts, no matter what may be the state of their contents or walls. The symptoms accompanying the operation are often at first alarming, but with proper care not very dangerous. As suppuration happens considerable fever, with a pulse of 110 to 120 beats, and rigors supervene. These abate, however, in a few days if there is made a free exit for the pus, the latter quickly taking on an innocent character. Complete obliteration usually occurs in from two to five months. Dr. Tuckwell remarks that a gradual puckering of the skin at the seat of incision is to be looked for as a favorable sign, marking the gradual contraction of the sac.[2]

In general, the measures by which obliteration may be accomplished by open treatment are three in number: (a) puncture with a large trocar and leaving in of the canula, (b) thorough cauterization of the abdominal and cyst walls, and (c) incision into the cyst with or without drainage. In operating by the first and oldest measure, the trocar will be thrust in at the most prominent portion of the tumor through the anterior abdominal wall. The peritonæum is but slightly lacerated and there is little danger of peritonitis, the canula that is left behind prevents the opening of the peritoneal cavity to septic influences.

The great drawback is that even with the assistance of a long elastic catheter or a double sound and syringe, the pus can hardly be emptied satisfactorily. Unsuccessful attempts to widen the opening with laminaria have been made, but it soon narrows again.[3] The pus then stagnates, with great danger of pyæmia or septicæmia. In calculous hydronephrosis this event is especially to be looked for. This measure has been tried three times, with two deaths[4] and one recovery,[5] the favorable result being independent of the operation, as the ureter again became permeable after the spontaneous discharge of two stones. In both fatal cases the cysts could not be destroyed, although in the first more than one and in the second two years were consumed in treatment.

Cauterization (b) of the abdominal and cyst walls to create adhesions and avoid opening into the peritoneal cavity has been employed four times,[6] and in all the opening was made by trocar. In one case fatal peritonitis supervened, in the others, in spite of daily drainage and injections, acute or chronic septicæmia was the cause of death.

The third procedure (c) is by an incision through the abdominal and cyst walls; this may be done either by opening directly into the peritoneal cavity, or after adhesions have been created between the parietes of the cyst and abdomen, the tumor may be incised without exposing the peritonal cavity. In some hydronephroses this incision could be made outside of the peritoneum.

The method first mentioned is the older and more dangerous of the two.[1] After laparotomy the cut edges of the cyst and abdominal wounds are to be stitched together, or the cyst before being opened is to be stitched to the wound in the integument. It is obvious that in the use of this method there is great liability to diffuse peritonitis. The results of this plan, however, are good, but are so made probably by the antiseptic precautions adopted. There are on record at least four cases[2] in which this method was employed on the lumbar side all of which were cured, and two instances of abdominal nephrotomy, one[3] of which died, and one[4] recovered. To these might be added the case of Dr. Wölfler's,[5] in which I cannot find the seat of incision, that resulted in a cure.

Prof. Simon regards incision after adhesions have been artificially induced as less dangerous. Recamier and his followers used caustics to create these adhesions; but many years ago Prof. Simon substituted the double puncture with two exploratory trocars; these are pressed through the integument at a distance of ¾ cm. from each other, and the canulæ left *in situ* after withdrawal of the stylets; later, for larger incisions he increased the number of trocars to four, making the double puncture a "mehrfache Punktion." After being thrust in the canulæ are stopped with wax and protected by charpie and plaster. Adhesions form, as Prof. Simon has proved, in twelve to fourteen hours, and for a radius about each canula of 2—3 cm., and are complete in from three to seven days, after which time the incision is to be made. To prevent any possible slipping away of the cyst from the canulæ they shonld be curved and describe a half circle with a radius of from 4 to 7 cm.

This operation can be performed from three different sides; if from behind (incisio renis lumbalis) the peritoneum is never injured; if from the side (incisio renis lateralis) it is rarely cut; if made in front (incisio renis anterior) it will always be cut. The objections to the incisio renis lumbalis are that the soft parts are here the thickest, that the room for incision is scanty, and that to reach the tumor the posterior portion of the kidney must be incised, a proceeding that causes profuse hæmorrhage. By the incisio renis anterior not only the peritonæum but the colon may be injured. Prof. Simon, therefore, prefers the incisio renis lateralis; from this side the renal substance is not likely to be wounded, the integument is little thicker than in front, and an opening can be made to the bottom of the cyst, giving free exit to any pus that might form. In an incision so made two fingers can be thrust to search the interior for renal calyces, calculi, etc. If there is needed a larger outlet the cyst and abdominal walls are to be first stitched together with a long curved needle.

The after-treatment consists in daily washing out the tumor with luke-warm carbolized water and drainage. The bandage should be changed frequently.

[1] Although Prof Czerny, (loc. cit.) says that "in single cysts the injection of iodine into the emptied sac may many times accomplish a lasting cure," I can find no such cure on record. See, however, case LIX.
[2] Tuckwell, *Lancet*, July 29, 1882.
[3] Simon, loc. cit., S. 227.
[4] Cases LI and LVII.
[5] Case LIII. [6] Cases L, LII, LIV and LV.

[1] Simon loc. cit., p. 230.
[2] Cases, lxii, lxviii, lxviii, lxv. [3] Case i. [4] lxi. [5] lix.

Prof. Simon performed the "mehrfache Punktion" eleven times for abdominal tumors, in all of which adhesions were successfully induced. This operation has been performed for hydronephrosis at least three times. In one[1] of the cases death from peritonitis resulted in 22 days, in the other two,[2] cures with fistulæ remaining were effected.

The above plan of treatment is certainly on the Continent regarded with much favor. The opinion of Dr. Ultzmann[3] is that of all modes known to surgery for the relief of hydronephrosis incision of the tumor, when done by Simon's method, is the most advantageous.

A modification of the above method consists in the re-creation of the permeability of the ureter or in the creation of a renal fistula. The clogged ureter may be made pervious either from the vesical or pelvic end; the most natural plan is to sound the ureter from its vesical mouth. In the male this is very difficult; in women, when anæsthetized, after widening the urethra and introducing the finger into the bladder, the mouths of the ureters can be easily touched. If the sound be now directed to the so-called ligamentum inter-uretericum from the middle and then pushed a little outwards, forwards and upwards, it will pass into the ureter and can be thrust to the pelvis renalis. This was done successfully 17 times by Prof. Simon.[4] If stones be present they can thus be forced back, strictures can be made pervious, and valvular stenoses widened.

Rarely can the ureter be sounded from the pelvic end, even with the tumor well incised. In a case, although aided by the endoscopic apparatus and magnesium light, and with his whole hand exploring the sac, Prof. Simon could not accomplish his object.[5]

These procedures failing, for the safety of the patient an external fistula may be made. By this means an infirmity remains, but danger to life is averted. The secretion is usually so scanty as not to be very burdensome, much of the secreting renal substance having regularly disappeared.

It is recommended that a lip-shaped fistula, with the skin adherent to the mucous membranes of the pelvis to prevent closing be made, and that the opening be on a side where the integument is not too thick. In 1870 Prof. Simon thus operated on a man, who, with a daily discharge of 150 ctm. of fluid from the fistula, now works as an efficient nurse in the surgical clinic at Heidelberg.[6]

In the opinion of Dr. Israel[7], the creation of a pelvic fistula is only indicated and possible where the pelvis renalis is greatly distended, but in cases where the calyces are the seat of large pockets, and the kidney thus is changed into a multilocular cystic tumor nothing could be expected from an incision into its substance.

There have been at least eight[1] cases operated on in this manner, all of which resulted in cure, and in most, if not all, the instances cited the cyst as appears from the daily diminution of the discharge, seems to be gradually drying up.

It adds much to the comfort of these patients to attach to the fistula a tube expanded below into a light rubber bag, and secured about the abdomen by a belt, for the purpose of catching the discharge. This apparatus, as Dr. Schramm remarks, can be worn without special discomfort. A most interesting letter from Prof. Pernice, of Greifswald, describing his case, the writer is unable, owing to the already great length of this essay, to insert, but some points described are certainly too important to be omitted.

The patient was an unmarried woman, 23 years of age, in whom the diagnosis of ovarian cyst with very long pedicle had been made, and for which an operation on the 28th of October, 1878, was essayed.

The description of the operation is given literally:

As soon as laparotomy was performed severe vomiting from the chloroform began: after the tumor was freely exposed it appeared to be covered on all sides with peritonæum, and gave the impression (Eindrück) to one as if a cyst of the broad ligament. It was then enucleated for a small space to the right and left, and punctured by the large trocar of Spencer Wells, and a perfectly clear, yellow fluid evacuated.

As the enucleation was proceeded with, it was quite easily accomplished on the left side by grasping the cyst-wall with the forceps, and by tearing away the peritoneal covering with the hand. At the lower part everything went well; the uterus and the left ovary could be obscurely felt in their proper relations. The enucleation was next continued on the right side, where difficulties presented themselves; after the cyst was scratched loose for about 4.5 cm. there appeared on the right wall a hard, glandular, polished organ that could only be a part of the liver pushed forward, or a portion of the kidney. Farther work on this side outside the tumor was impossible, since by every tear or cut a considerable hæmorrhage from the glandular structure spoken of happened. Therefore the tumor was slit up at the place where it had first been incised to get at it from the interior. We succeeded in probing clear to the right renal region and could touch the liver. Upon the right side, corresponding to the bit of glandular tissue alluded to, could be felt a sharply defined ring of the size of a fifty pfennig piece. In this, but somewhat under the plane of the cyst-wall, lay a renal papilla. The smooth glandular lump upon the outer wall of the tumor was then the remains of the right kidney, much pushed out of its normal situation, the tumor itself, the dilated pelvis and calyces. Inserted into the sac was the distended right ureter.

It was then determined upon to draw the partly enucleated tumor out of the abdomen, to take away as much as possible, and stitch the remainder of the hydronephrotic sac to the abdominal wound. That part of the cyst-wall to which the ureter was attached,

[1] Case LVI.
[2] Cases LVIII and LX.
[3] Ultzmann. Real Encyclopædie der Gesammten Heilkunde. Bd. VI, p. 662.
[4] Dr. Hirschberg asserted, in the 6th Congress of German Surgeons that he saw Prof. Simon do the above operation, and, passing his finger through the urethra, could feel the probe in the ureter. Verhandlungen, etc., p. 36.
[5] Dr. R. F. Weir, (Case LXIII), however, succeeded in probing the ureter from the pelvic end.
[6] Czerny, loc. cit.
[7] Israel, Berl. *Klin. Wochenschrift*, Nov. 5. Ein Fall von Nieren-extirpation.

[1] Cases LVIII, LX, LXV, LXVI, LXVII, LXIX, LXXI, LXIV.

with much of the sac, was then cut away. The upper part of the ureter was left behind, ligatured and thrown back. That part of the ureter cut away was found perfectly pervious. After the customary dressing a bandage was placed about the abdomen. The spray was continuously used during the operation which lasted an hour and a half.

The patient rallied well from the operation and made a good recovery, with a fistula remaining; on the first day of March, 1879, there was complete cicatrization of the wound after some slight ulceration; the opening is 3 cm. in length, and is so stopped as to permit the drainage of the urine. Later a satisfactory apparatus, by which the urine dribbled into a flask, was arranged.

The chief point of interest about this case is the notable displacement of the kidney, by which an error in diagnosis was caused. The subject of hydronephrosis in the so-called wandering kidneys is one too extensive to be considered in this essay. The writer refers those interested to an exhaustive work on such lesions, "Die Warderniere der Frauen," Berlin, 1881, by Prof. Landau.

It only remains for the writer to say that Dr. J. Schramm,[1] in a lately published article, states that there have been but four well-defined cases of hydronephrosis in the wandering kidneys that have been operated on. In one case[2] a cure was effected by extirpation of the offending organ, in the other three[3] by a creation of a permanent fistula from the pelvis renalis.

Of the 22 patients, (Table III), in whom the wound was dressed after some one of the open methods, 18, or over 68 per cent. recovered.

The three supplementary tables reveal some interesting facts. Thus, in 50 instances where the seat of the lesion is noted, 24 are found to be right and 26 left hydronephroses. No age, also, appears to be exempt, for in a total of 62 cases, 4 occurred in those between the ages of 1 and 10 years, 11 in those between 10 and 20, 15 in those between 20 and 30, 7 in those between 30 and 40, 14 in those between 40 and 50, 8 in those between 50 and 60, and 3 in those between 60 and 70.

Females appear to be more subject to the malady than males, for of 68 cases in which the sex is recorded, 43 occurred in the former and 25 in the latter sex.

There are, in addition, noted certainly 13, and perhaps more cases in whom, by men of undoubted surgical skill, the diagnosis of ovarian cyst was made and adhered to until after laparotomy or lumbar incision, the tumor lay exposed before their eyes.

From the gloomy declaration in regard to the treatment of hydronephrosis, that "of therapy there need be no account given" to the happier statement, proven by the records collated below, that 63 per cent. of patients operated on are cured by lumbar nephrectomy, 68 per cent. by open methods in general, and, up to date, 100 per cent. by either lumbar incision and drainage or the creation of a fistula, seems a long distance, and yet these are but the results of the last 15 years. It is well, too, to remember, at least for young men, that these wonderful successes were brought about, using the word in its noblest sense, by the empirical method, and that they quite justify the advice of old Aretaeus: "Trial indeed is a good teacher. It is therefore a man's duty to try, for it is ignorance that is timid."

In the first series of the following collection of cases are given, the attempted and accomplished extirpations; in the second, the general operations for obliteration of the cyst. The latter series is subdivided into two groups—(*a*) Operations for obliteration by emptying the cyst and occluding air, and (*b*) operations for obliteration by open treatment of the wound.

[1] Schramm, loc. cit., p. 561.
[2] Case XII.
[3] Cases LX, LXIV, LXVI.

Table I.

ATTEMPTED AND ACCOMPLISHED EXTIRPATIONS.

	Date.	Age.	Sex.	Operator.	Operation.	Result.	Remarks.
I.	1865	23	F.	Baum, (Göttingen) communicated by Krause in v. Langenbeck's Archiv., VII, I, p. 219	Puncture, and 1½ years after attempt to extirpate; after laparotomy cyst emptied by trocar, because adherent, cyst stitched to integument.	Death by peritonitis in two days.	Left hydronephrosis with valvular closure of ureter. Right kidney enlarged.
II.	1866	43	F.	Spencer Wells. Diseases of the Ovaries, p. 208.	First punctured, two months later laparotomy; deeper parts of cyst too adherent to remove; omentum and intestines cut, three vessels ligated and wound closed.	Death 30 hours after operation.	Cyst of left kidney as large as a man's head. Right kidney enlarged and pale.
III.	1866	22	F.	Simon. Communicated to Deutsche Klinik, 1868, No 1 by Martini.	Laparotomy: tumor behind colon descendens and cœcum. Extirpation impossible. Cyst emptied by trocar and wound closed.	Death from peritonitis in 7 days.	Large right hydronephrosis, valvular closure of ureter. Left kidney enlarged but healthy.
IV.	1869	19	F.	Esmarch. Published by Schetelig. Archiv., für Gynækologie, B. I., Heft., III., p. 415.	Puncture, 3 months later extirpation; laparotomy, cyst adherent to left ovary and tube: great hæmorrhage, 16 ligatures taken.	Death in 36 hours.	Large left hydronephrosis; cyst walls 1½ cm. thick. Right kidney enlarged, but healthy.
V.	1871	...	F.	Meadows *British Med. Journal*, 1871.	Laparotomy. Extirpation.	Death on the 16th day from hæmorrhage from the pedicle.	No trace of renal substance in the cyst; tumor diagnosed ovarian.

TABLE I.—CONTINUED.

Date.		Age.	Sex.	Operator.	Operation.	Result.	Remarks.
VI.	1872	16	F.	Sp. Wells, loc. cit., p. 216.	Diagnosis made after laparotomy; cyst punctured and its wall fixed to integument; a day later it refilled and a glass tube was inserted.	Death from uræmia in four days.	Right hydronephrosis; previously diagnosed multilocular ovarian cyst.
VII.	1873	49	F.	Campbell, *Edinburgh Med. Journal*, 1874, p. 36.	Laparotomy; nephrectomy.	Cure.	Cyst involving lower third of kidney and diagnosed ovarian.
VIII.	1875	42	M.	Le Dentu. Reported by Harris, *Amer. Jour. Med Sciences*, 1882, p 112. Doubted by Quénu *Archiv Gen. de Med.*, Dec., 1882.	Lumbar incision, complicated by perinephritic abscess. Nephrectomy.	Cure.	
IX.	1876	46	F.	Billroth. Archiv. für Klin. Chirurgie., bd. XXI., p. 694.	Laparotomy; tumor enucleated.	Death on second day from septic peritonitis.	Tumor diagnosed ovarian; degenerated kidney found in the sac.
X.	1877	24.	F.	Heath. Harris, loc. cit.	Laparotomy; tumor enucleated Nephrectomy.	Death.	Calculous hydronephrosis, diagnosed ovarian cyst.
XI.	1878	21	M.	Müller	Lumbar incision. Nephrectomy.	Cure.	Calculous hydronephrosis.
XII.	1879	37	F.	Czerny. Archiv. für. Chirurgie, bd. XXV., H. IV., p. 860.	Laparotomy. Nephrectomy.	Cure; patient discharged in 30 days.	Right hydronephrosis in wandering kidney rightly diagnosed; ureter S shaped but permeable.
XIII.	1880	7	F.	Thornton. Lancet. 1880, vol. I.	First aspiration of 6½ pints fluid; then laparotomy and nephrectomy	Cure.	Left hydronephrosis, probably congenital.
XIV.	1880	46	F.	Savage. *Lancet*. 1880, vol. I., p. 601.	Laparotomy; nephrectomy.	Cure.	Large hydronephrosis, dilated pelvis, calyces and papillæ easily distinguished.
XV.	1880	23	M.	Czerny. Transactions Internat. Med. Congress, 1881, vol. II., p. 252.	Laparotomy; nephrectomy.	Death 30 minutes after operation.	Malignant hydronephrosis with tuberculous diathesis.
XVI.	1880	40	F.	Czerny, loc. cit.	Laparotomy, nephrectomy.	Death after 48 days.	Right partial hydronephrosis on lower portion of kidney.
XVII.	1880	27	F.	Speigelberg. Reported by Kroner. Arch. für. Gyn, bd. XVII.	Laparotomy; nephrectomy; first punctured.	Cure.	Right hydronephrosis; operation because of fistula.
XVIII.	1880	20	F.	McClelland. Harris, loc cit.	Lumbar nephrectomy.	Cure.	Calculous pyo-hydronephrosis with fistula in inguinal and lumbar regions.
XIX.	1880(?)	5	..	Bardenheue. Czerny, loc cit.	Lumbar nephrectomy.	Cure in 6 weeks.	Left hydronephrosis.
XX.	1880	47	F.	F. Lange. Harris, loc. cit.	Lumbar nephrectomy.	Death.	Cystic kidney containing concretions; other kidney involved.
XXI.	1880	...	F.	Ollier. Quénu, loc. cit.	Laparotomy; nephrectomy.	Death in 3 days.	Cyst of kidney diagnosed ovarian containing clear yellow fluid, with traces of urine.
XXII.	1880	50	F.	F. B. Archer. *Lancet*, July 1, 1882.	Laparotomy; nephrectomy.	Cure.	Right hydronephrosis of traumatic origin diagnosed ovarian cyst, and weighing 5 lbs.
XXIII.	1881	51	M.	Czerny, loc. cit.	Oblique lumbar incision; nephrectomy	Cure.	Left partial hydronephrosis with anglo-sarcoma.
XXIV.	1881	32	F.	F. A. Kehrer. Arch. für. Gynækol., 1881, H. III., p. 371.	Laparotomy; nephrectomy.	Cure.	Right hydronephrosis containing gas.
XXV.	1881(?)	...	F.	Baum. Quénu, loc. cit	Nephrectomy.	Death.	Left hydronephrosis.
XXVI.	1881	54	M.	Stockwell. Quénu, loc cit.	Lumbar nephrectomy.	Death.	Kidney much sacculated and enlarged.
XXVII.	1881	39	M.	Le Dentu. Quénu. loc. cit.	Lumbar nephrectomy.	Cure.	Hydronephrosis and inguinal fistula.
XXVIII.	1881	32	M.	Czerny, loc. cit.	Oblique lumbar Incision; nephrectomy.	Death in 37 hours from anuria and vomiting.	Right hydronephrosis, calculous; left kidney atrophied.
XXIX.	1882	...	...	Heywood Smith. Harris, loc. cit.	Laparotomy; nephrectomy.		
XXX.	1882	52	F.	Goodell. *Philadelphia Medical Times*, October 21, 1882.	Laparotomy; nephrectomy.	Cure.	Left calculous hydronephrosis regarded as cyst of the broad ligament.
XXXI.	1882	36	F.	C. J. Cullingworth. *Medical Gazette*, December 2, 1882.	Laparotomy; nephrectomy.	Death.	Left hydronephrosis.
XXXII.	1883	53	M.	R. Davy. *Weekly Med Rev.*, vol. viii, No. 22.	Lumbar nephrectomy.	Cure.	Left kidney in fibro-cystic state.

TABLE II.

OPERATIONS FOR OBLITERATION OF THE TUMOR. (A.)

Date.		Age.	Sex.	Operator.	Operation.	Result.	Remarks.
XXXIII.	1860	....	....	Martineau. Simon, Ch., der Nieren, p. 274.	Single puncture, without leaving in canula; 9 litres of bloody fluid withdrawn. Later punctured by bistoury.	Death from peritonitis as fluid entered the abdominal cavity.	Large hydronephrosis.
XXXIV.	1862	....	....	Jos. Thomson. Langenbeck's Archiv., V, p. 328.	Incision between the two last ribs, then cyst punctured by trocar. Operated on three times.	Death from spontaneous rupture of cyst 1½ years after last puncture.	Large left hydronephrosis.
XXXV.	1862	3½	M.	W. J. Little. Langenbeck's Archiv., V, p. 333.	Single puncture, three times in 3 months; then punctured twice, leaving in the canula.	Death from fever three years after first puncture.	Large congenital right hydronephrosis.

TABLE II.—CONTINUED.

Date.	Age.	Sex	Operator.	Operation.	Result.	Remarks.
XXXVI. 1865	4	M.	Hillier, *Med Times and Gazette*, 1865, Vol. I, p. 320.	Punctured several times; unsuccessful attempt to make permanent fistula.	Improvement.	Large congenital hydronephrosis simulating ascites.
XXXVII. 1867	64	F.	Béhier. Virchow's Jahresbericht, II, p. 173.	Single puncture, repeated 10 days later.	Death from erysipelas.	Very large right hydronephrosis, diagnosed ovarian cyst.
XXXVIII. 1867	...	F.	Bérard. Virchow's und Hirsch's Jahresbericht, 1868, II, p. 161.	Twice punctured.	Death.	Enormous right hydronephrosis, diagnosed ovarian cyst.
XXXIX. 1868	59	F.	Sp. Wells, loc. cit.	Twice punctured in 3 months.	Death five months after second puncture from traumatic rupture of cyst.	Large left hydronephrosis—seven stones found in it.
XL. 1868	44	F.	Simon, loc. cit.	Puncture, two canulæ left in to promote adhesions. Punctured a second time.	Death from congestion of lungs on 14th day.	Large right hydronephrosis, with valvular closure of ureter.
XLI. 1871	24	M.	P. H. Pye. Smith, Trans. Path. Society, Lond., Vol. XXIII.	Single puncture.	Death two months later from diarrhœa.	Left hydronephrosis of traumatic origin.
XLII. 1872	16	F.	Sp. Wells, *Med. Times and Gazette*, 1872, Vol. I, p. 483.	Puncture.	Death from uræmic fever with temperature of 110 degrees.	
XLIII. 1872	20	M.	Holmer, pub. by Fenger, Nordiskt Med. Arkiv., Band, V, Nr. 12.	Aspiration—2,000 c ctm. clear fluid drawn off.	Death from inguinal abscess caused by old perinephritis.	Partial right hydronephrosis.
XLIV. 1876	34	F.	Rosenberger, Berliner *Klin. Wochenschrift*, 1880, No. 19.	Puncture.	Death in 3 weeks.	Left hydronephrosis, diagnosed ovarian cyst.
XLV. 1879	11	M	J. L. Hicks, *N. Y. Med. Record*, Apr. 17, 1880.	Aspirated three times. First, two pints; second, two quarts; third, two quarts of fluid drawn off.	Cure.	Right hydronephrosis of traumatic origin.
XLVI. 1880	12	M.	Croft, *Brit. Med. Journal*. 1881, I, p. 123.	Aspirated eight times. At first 79 ounces of fluid were drawn off.	Cure.	Left traumatic hydronephrosis—hæmaturia for 5 days.
XLVII. 1880	51	F.	O. W. Doe, Boston *Medical and Surgical Journal*, 1880, No CIII, p. 274.	Aspirated twice. At first 16, at second time 6½ ounces were obtained.	Cure.	Hydronephrosis, coincident with stricture of rectum, probably cancerous.
XLVIII. 1881	...	F.	Lucas, *Brit. Med. Journal*, Sept. 29, 1883.	Aspirated several times.	Temporary relief.	
XLIX. 1881	40	F.	G. M. Staples.	Aspirated four times. First, 44; second, 39; third, 37, and fourth time 55 ounces were drawn off.	Marked improvement.	Left intermittent hydronephrosis.

TABLE III.

OPERATIONS FOR OBLITERATION OF THE TUMOR. (B.)

Date.	Age.	Sex.	Operator.	Operation.	Result.	Remarks.
I. 1855	48	M.	Nelaton. Simon, Chirurgie der Nieren, p. 281.	Caustic potassa applied; later incision with trocar. Several times injected with iodine.	Death in 55 days.	Left hydronephrosis diagnused as splenic tumor.
LI. 1864	13	F.	Dumreicher. Langenbeck's Archiv., Band VIII, p, 705.	Punctured several times, then injections of iodine; also of ferri sequichlor. Three times catheter inserted, and cyst daily syringed out with luke-warm water.	Death a year after first puncture.	Right hydronephrosis with many adhesions, regarded as a hydrovarium.
LII. 1865	48	M.	Touren. Virchow's Jahresber., 1866, II, p. 149.	Vienna paste applied five times; syringing out of cyst, and injections of iodine.	Death 17 days after operation.	Right hydronephrosis.
LIII. 1865	64	F.	Sp. Wells, loc. cit.	Puncture with trocar, again with bistoury and tent inserted.	Cure after discharge of 2 stones per urethram.	Right hydronephrosis.
LIV. 1868	...	M.	Siotis. Virchow's und Hirsch's Jahresbericht, 1868, II, p. 161.	Caustic applied, and puncture.	Death from peritonitis.	Left calculous hydronephrosis—right kidney doubled in size.
LV. 1868	26	M.	Dolbeau. Simon, Ch. der Nieren, p. 281.	Caustic applied. A few days later opened by trocar. Cavity daily syringed out.	Death in several months.	Right hydronephrosis.
LVI. 1868	39	M.	Simon. Reported by Hotz, *Berl. Klinische Wochenschrift*, 1869, No. 23.	Double puncture, with incision in most prominent part of swelling. Two catheters put in, and cyst daily syringed out.	Death from peritonitis.	Left hydronephrosis in horse shoe kidney.

TABLE III.—CONTINUED.

Date.	Age.	Sex.	Operator.	Operation.	Result.	Remarks.
LVII. 1870	...	F	Rose. Simon, loc. cit.	Punctured, and wound kept open	Death two years later. Other kidney involved.	Large left hydronephrosis.
LVIII. 1870	26	M.	Simon, loc. cit., p 288.	"Mehrfache Punktion," with subsequent incision. Iodine injections and cauterization of calyces fruitless Fistula made.	Cure, with renal fistula..	Right hydronephrosis.
LIX. 1876	13	M.	Wölfler, *Wiener Med Wochenschrift*, 1876, No. 8.	Three successive punctures, with injections of very dilute iodine twice.	Cure.	Congenital hydronephrosis, with much urea in fluid.
LX. 1877	21	F.	Winckel, Verhandlungen der Deutschen Gesellschaft für Chirurgie, 6ter Congress, p. 34.	Exploratory puncture. Fluid drawn off, then trocar inserted and "mehrfache Punktion" successfuliy performed. Drainage tube inserted.	Cure, with fistula. Apparatus fixed to patient, who was exhibited to the 6th Congress of German Surgeons.	Right hydronephrosis in a supposed wandering kidney.
LXI. 1878	19	M.	R. F. Weir, *N. Y. Med. Record*, May 6, 1882.	Aspirated three times, then abdominal nephrotomy and drainage.	Cure.	Left hydronephrosis.
LXII. 1877	27	F.	Thornton, *Brit. Medical Journal*, May 26, 1883	Tumor in right loin twice antiseptically incised and trained. Tumor in left side opened, and drained later. Ovariotomy also performed.	Cure.	Double cysts of kidneys, supposed to be due to compression of ureters by early pregnancy.
LXIII 1879	21	M.	R. F Weir, *N. Y. Med Record*, M'rch 13. 1880.	Twice aspirated ; then lumbar nephrotomy and drainage,	Cure.	Left hydronephrosis. Metallic probe passed freely into ureter, but no calculus found.
LXIV. 1879	27	F.	Ahlfeld, Arch. für Gynækol., 1879, XV, p 114.	Laparotomy Sac adherent behind when vessels entered. Creation of fistula determined on, as three papillæ were found. Cyst stiched by 12 suture to wound. Operation three hours long.	Cure, with pelvic fistula.	Hydronephrosis in wandering kidney. Diagnosed ovarian cyst. Colon ascendens in front of the cyst. Tumor right
LXV. 1880	47	F.	G. A. Peters, *N. Y. Med Record*, May 6 1882.	Lumbar nephrotomy. Two drainage tubes inserted, and cavity daily irrigated with carbolized water.	Cure, with fistula, thro' which fluid dribbles slightly.	Very large left hydronephrosis.
LXVI. 1880	60	F.	Landau. Archiv. für Chirurgie, Bd. XXVI, Heft 3, 1881.	Exploratory puncture, with negative results. Punctured 4 times and evacuated ; then ureter, cyst and abdominal wall stitched together. Again punctured and drained. Permanent fistula made.	Cure. with fistula.	Right hydronephrosis in supposed wandering kidney.
LXVII. 1880	47	F.	Svensson, Hygeio, Stockholm, July, 1881.	First aspirated, and 200 c c. fluid drawn ; again one month later, and 600 c c. obtained ; a third time, and 300 c.c obtained. Oct, 28, 1880, cyst sewed to abdomen by 7 or 8 sutures to create adhesion. Nov. 7, Paquelin's cautery burned through cyst walls, and 1700 ctm clear fluid drawn off. Two drainage tubes inserted, and irrigation by warm solution salicylic acid.	Cure, with fistula. Cavity steadily diminishing.	Left hydronephrosis.
LXVIII. 1881	11	M.	Tuckwell, *Lancet*, July 29, 1882.	Aseptic lumbar nephrotomy and drainage. Aspirated at first.	Cure.	Left hydronephrosis, supposed to be congenital.
LXIX 1881	47	F.	Schramm, *Berl. Klinische Wochenschrift*, Sept, 10, 1883.	Laparotomy twice ; exploratory incision first with Franzel's trocar ; 800 c.c reddish urinous fluid let off. In the first laparotomy the sac collapsed, as too big a trocar was used Right ovary extirpated. This on March, 10, 1881. On Nov. 23, 1881, by small trocar, 1200 c. ctm. fluid let off. Sac stitched to integument. Artificial pelvic fistula made. Daily diminution of discharge.	Cure, with fistula, to which an apparatus was adjusted.	Large right hydronephrosis in wandering kidney.
LXX. 1882	10	M.	A. T. Cabot, *Boston M. and Sur. Journal*, Feb 22, 1883.	Twice aspirated ; then lumbar nephrotomy. Cyst wall stitched to skin.	Cure.	Right hydronephrosis of traumatic origin.
LXXI. 1878	23	F.	Pernice. Private letter to writer.	Laparotomy. Cyst tapped by Sp Wells' trocar. Part of cyst and ureter cut away. Cyst stitched to wound, and fistula made.	Cure, with fistula.	Right hydronephrosis in an abnormal movable kidney. Diagnosed ovarian cyst.

ALCOHOL AND THE FATS IN THE TREATMENT OF PHTHISIS.

[From a Clinical Lecture by P. H. Cronin, Ph.B., A.M., M.D., one of the attending Physicians of Cook County Hospital.]

REPORTED BY J. K. SUTTON, M.S.

It has been said by a well-known authority on the subject of phthisis, that there is nothing in the whole range of medical science, which the student ought to study more carefully than the cachexia, or special form of ill health, associated with the occurrence of tubercle and general scrofulous affections. Indeed, it may be said that in every phase of his professional career, a knowledge of the pathology of scrofula, in its general or special aspect, is an absolute necessity.

Experience has fully demonstrated that not to causes within the province of the medical man, solely, can the origin of tubercle or the scrofulous diathesis be traced. Yet it must be acknowledged that by the confidence naturally acquired by him, as the trusted friend of the most exclusive families, he may exercise a potent influence for good in teaching how the public may control the inroads of consumption, by prudent marriages, sanitary attention to offspring, and the absolute need of fresh air, with freest ventilation, in the dwellings of rich and poor alike. In short, it is by the mode of life as citizens of the world; in the social relations of husbands and wives, parents and children, as well as in the public relations of teachers and pupils, masters and workmen, that the extent and ravages of consumption can best be controlled.

But all of this, at which I have merely hinted, is for your future study, and since the tendency of modern medicine is to "throw physic to the dogs," in so far as its practice extended in the days of our fathers, I doubt not that the majority of you will devoutly kneel at the shrine of the goddess Hygeia and pay homage to that growing sentiment in the profession in favor of general sanitation, as influencing the preservation of the highest standard of physical well-being.

The cases before us to-day clearly demonstrate that phthisis is truly, as its name implies, a wasting disease. The wan features, the sunken eyes, the shriveled skin, and general emaciation are the most eloquent exponents of poor nutrition and malassimilation, and since this bodily condition calls for a remedy, it might be well to study as briefly as the sequence will permit, the causation of phthisis, before entering upon its treatment.

That phthisis is a constitutional disease, goes for the saying. It is characterized by lesions commencing with induration of a lobe or lobule of the lungs, ending in the disintegration of the new material and of the structures involved in this induration; the formation of cavities, and the accumulation and constant discharge of purulent secretion, with or without miliary tubercle. Constitutionally, the result is the deposit of a soft, unorganized matter, white or pale yellow in color, firm, somewhat resembling curd or soft new cheese, though less tough, sometimes granular and friable, and consisting largely of albuminous material. It is often found associated with a purulent-like fluid, and is frequently to be met with in rounded masses varying from the size of a millet seed to that of a hen's egg, or larger. This material may be enclosed in cysts or simply deposited within the natural canals of the body, or it may be diffused, as if by infiltration, through the textures of the various structures. To the rounded masses is given the name of tubercle, and the material itself has obtained the name of scrofulous or tuberculous matter.

The disease manifests a remarkable tendency to certain specific forms of nutritive disorders, which ultimately lead to extreme wasting of the systemic structures. Indeed, it would seeem as though the vital forces were incapable of completing tissue organization, owing to the constant accumulation of systemic debris, acting as a hindrance to repair of the waste resulting from tissue metamorphosis. That such is really the case I need not tell you. It is known that the venous radicles and lymphatics serve to build or renew tissue, as well as to act the part of scavengers for the organism by the removal of effete material. Now, when the scale of nutrition is below par, whether as the result of actual want of food or improper assimilation, the function of repair is necessarily arrested, while destruction or consumption goes on with even more than wonted vigor. Soon this want of balance in the nutritive function manifests itself, in hectic and the accompanying structural changes so familiar to all of you.

As regards loss of weight, it is astonishing to note to what an extent bodily waste may go on without extinguishing the lamp of life. Chossat, in his "*Recherches experimentales sur l'inanition*," has shown that the average loss of weight occurring in healthy, warm-blooded animals, between the commencement of starvation and death, is 40 per cent. In other words, an animal without the intervention of disease, dies when it has lost two-thirds of its body weight. Dr. Tanner is said to have lost one pound daily during his noted fast. The researches of Chossat possess for us the additional interest of locating the loss sustained by the different tissues of the body. Thus, fatty tissue almost wholly disappears, 93½ per cent. going to waste. The blood loses 75 per cent., the spleen 71 per cent., and the pancreas 64 per cent. of their substance. The muscles of locomotion show a loss of 42½ per cent., while the nervous system exhibits a waste of less than two per cent.

As in starvation, *per se*, so in the quite as effective starvation of phthisis. Indeed, the tissue waste, if we except that of the pulmonary organs, noted in consumption, bears a striking analogy to the structural loss so manifest in ordinary inanition. It is evident that the atrophy of the pancreas, so well marked a feature in phthisis, must lead to imperfect preparation of fatty material for assimilation. This soon reduces the needed supply of adipose tissue to a minimum. The spleen fails in its wonted action, and the blood itself becoming lessened in quantity, necessarily embarrasses the lungs and heart and kidneys. The nervous tissue alone preserves a nearly wonted vigor. Indeed, it is remarkable, that the

mental faculties remain intact, excepting that the effect of the disease upon the mind is such as often to impair the ability to realize the extent of a serious affection.

In view of the fact that the body requires thirteen times more carbonaceous than nitrogenous food, for its sustenance, the daily consumption of carbon being 4,000 grains, that of nitrogen about 300 grains, the prime indication for treatment of a disease characterized by so large a percentage of waste of carbon as is manifest in phthisis, is a plentiful supply of easily combustible material. Such a material we have in alcohol, freed from the impurity of fusel oil, which latter is of slow oxidizable power and absolutely poisonous.

Experiment has shown that the combustion of one gramme of pure alcohol raises the temperature of seven liters of water one degree Centigrade. Cod-liver oil, in the same quantity, brings to a like degree of temperature nine liters. Hence, the relative heat-producing powers of alcohol, and the well-known nutrient oil are, as say, three to four. Calculated on the above basis, three and one-half ounces of cod-liver oil suffices to maintain one-third of the body heat for twenty-four hours, while about four ounces of alcohol, or about the quantity contained in a liter of light wine, serves the same purpose. There is this difference, however, between the two forms of nourishment. The oil, if tolerated, is decidedly curative, and thus becomes a positive benefit throughout the life of the individual using it. Not so with the use of alcohol, for in the majority of cases the cure is quite as bad as the disease, physically, and not infrequently leaves the patient a moral wreck.

The fats then, chief among which is cod-liver oil, form the main-stay of rational treatment of phthisis. But in the case of this highly-prized remedy we meet with an obstacle at the very door of promised relief. For, if cod-liver oil be nauseating to one in vigorous health, it is positively disgusting to a phthisical patient. Then, too, the system of such a patient is illy-prepared to assimilate the raw oil, and with food within easy reach of him he may die.

Here, however, the chemist and skillful pharmacist come to the relief of physician and patient alike. Nature's methods are studied, the wasted pancreas is assisted by the rest afforded by emulsionized oil. The administration of nutrient salts, as the phosphates of lime and magnesia, give needed energy to the venules and lymphatics, the blood is enriched by the assimilation of milk and other well-balanced foods, while the various symptomatic manifestations, such as cough, night sweats, dyspepsia, hæmorrhage, and general nervous unrest, yield to systemic or special treatment, and finally God's air and sunshine thrown around all, the hope grows stronger daily that the energizing hand of nature may assist our own in leading our patient to renewed life and happiness.

PROFESSOR D. W. YANDELL, OF LOUISVILLE.—We regret to learn that this distinguished member of the profession, after suffering several weeks of confinement with rheumatism, has been obliged to visit Florida in the hope of a more perfect recovery.

MEDICAL PROGRESS.

MATERIA MEDICA AND THERAPEUTICS.

THE BEST TIME FOR ADMINISTERING MEDICINES.—*The Midland Medical Miscellany* has an excellent article on this subject, in which it answers the question: Before or after meals? Such is the question often asked of the doctor, but the answer is not always ready. Medicines that are irritating should be given after meals, when the stomach is full, viz.: the salts of copper, zinc, iron and arsenic, in large doses. Small doses, intended to act on the stomach terminals of the vagi, must be given when the organ is empty. Chemical reasons also have their influence, thus, oxide and nitrate of silver, intended for local action, should appear in the stomach during its period of inactivity, lest, at other times, chemical reactions destroy the special attributes for which these remedies are prescribed. Iodine and the iodides further illustrate this point. Given on an empty stomach they promptly diffuse into the blood, but if digestion is going on, the acids and starch form products of inferior activity, and thus the purpose which they were intended to subserve is defeated. Substances prescribed to have alveal action on the mucous membrane, or for prompt diffusion unaltered, are preferably given before meals. The condition of the stomach veins after meals is such as to lessen the activity of diffusion of poisons, and hinders their passage through the liver. It follows that active medicaments in doses near the danger-line, are more safely administered after meals.

When shall acids and alkalies be given, before or after meals? First, as to acids. When acids are prescribed with the view to check the excessive formation of the acids of the gastric juice, they may be given before meals—as, by the laws of osmosis, they will determine the glandular flow of the alkaline constituents of the blood. The same reasoning would hold good when the alkaline condition of the blood was in excess; osmosis being favored, the acid would reach the blood more readily. Second, as to alkalies. These may be given just before meals, when the acid forming materials in the blood diffuse into the stomach glands, and after digestion is completed, when the alkalies diffuse directly into the blood, without interference from the contents of the stomach. An alkali taken during the time when the reaction of the stomach juices should be strongly acid, must necessarily hinder, if not arrest, the digestive process for the time being. The metallic salts—notably corrosive sublimate, alcohol, tannin, and some other agents—impair or destroy the ferment, or digestive power, of pepsin. Wine that is intended to act as a food, is most beneficial when taken slowly during the course of the meal. The objection as regards the ill effect of alcohol on pepsin, is not applicable here, except to the stronger spirituous wines in large quantities, for the ordinary medicinal wines do not have sufficient alcoholic strength to injure this ferment. Iron, phosphates, cod-liver oil, malt, and similar agents should, as a rule, go with food through

the digestive process, and with the products of digestion enter the blood.

Hydrastis Canadensis in Uterine Diseases.—Prof. Schatz, of Rostock, in the *Deutsche Medical Zeitung*, speaks highly of this drug, which he has used in the form of the fluid extract (Parke, Davis & Co.) in functional disturbances of the uterus and ovaries, anomalies of menstruation, and direct or reflex, or simply congestive disturbances, which exclude operation and call for medication. This drug contracts blood-vessels, and thus diminishes congestion of the genital organs. In long-continued or large doses it diminishes the frequency of menstruation; the flow is also diminished, and pain is lessened, and often removed entirely in vaginal hæmorrhage and dysmenorrhœa that has no local cause, as well as in diseases of the uterus and its neighborhood. Its effects are noteworthy in many myomata, the hæmorrhage occasioned by them being much lessened and sometimes entirely prevented. He generally gives twenty drops of the fluid extract four times daily, not only whilst hæmorrhage is actually present, but in preference a week before the anticipated painful or profuse menstruation. This drug occasionally, after lengthened employment, improves the appetite. This from one who, according to the *Medical Press*, from which we quote, has removed the whole uterus at least ten times, is certainly very high recommendation.

Subcutaneous Injection of Iron.—Experimenting on the behavior of iron within the animal system, Dr. Glacoeke reports in the *Archiv. für Experimente Pathologie und Pharmakol.*, that he has found the ferrum citricum oxydatum to be the best form of iron for subcutaneous injection. No reaction takes place at the site of the puncture. The iron is excreted through the kidneys, not through the glomeruli, but through the epithelium of the tubuli uriniferi. The excretion is complete within twenty-five hours. The liver to a greater extent takes part in the elimination. The injections are made in the long dorsal muscles or in the nates. The solution should not be more than one month old, and for adults doses of 1½ grains in a 10 per cent. solution are recommended.

In the case of an extremely chlorotic girl, in whom the proportion of hæmoglobin in the blood was 38 per cent. of the normal, it rose after fifty-four injections to 82 per cent., and the patient had in the meantime gained sixteen pounds in weight; the menses also, which had been absent for nine months, returned. Good results were also obtained in a case of secondary anæmia from hæmorrhage from the stomach.

If too much iron be injected, toxic effects may be manifested, in the shape of general *malaise*, vomiting and weakness. Diarrhœa may also come on.—*Medical Press.*

Gallic Acid in Hæmorrhage from the Urinary Organs.—Lionel S. Beale, in the *Lancet*, recommends the use of gallic acid in this affection in large doses, and persisted in for several days. As gallic acid probably acts according to the strength of its solution, which bathes the bleeding tissue, it is necessary to insure the introduction of a certain quantity in the blood by the frequent administration of successive doses; as it soon passes away from the blood, being carried off in the urine, we must give it in quantity and often enough to more than compensate for this loss. He has found it valuable in chronic bleeding from the surface of the mucous membrane of the pelvis of the kidney, ureters, bladder, and urethra, and from villous growths, as well as in the very obstinate hæmorrhage from large fungous tumors of the kidney and bladder. The remedy should be given in frequent doses, day and night, until the bleeding is very decidedly reduced in degree, when it may be ordered once in six hours, or less frequently. Gallic acid seldom disagrees in any way. It does not cause constipation, and even when the crystals are swallowed in a state of suspension in water or mucilage, the stomach is not disturbed by their presence. The glycerine of gallic acid is, however, the most pleasant form in which to prescribe the remedy. This contains one part of gallic acid in four. Forty minims will contain ten grains, and may be given in distilled water, peppermint, orange, or other water.

Dr. Beale has given ten-grain doses every three hours, without intermission, for three weeks, no objection having been made on the patient's part.

Condensed Mare's Milk.—The *Lancet* gives a reference to a preparation by a Russian company, called "Carrick's Russian Condensed Mare's Milk Company," which may be found useful in many cases of delicate infantile digestion. The similarity of human milk to that of the mare is well known. Cow's milk is quite unlike both, and it is not wonderful that many infants are unable to digest it. The mare's milk is concentrated to one-eighth by evaporation in vacuo, and is sufficiently preserved by the addition of 3 per cent. of sugar, so that the milk obtained on dilution is not unduly sweet.

OBSTETRICS AND GYNÆCOLOGY.

Phenomena Observed at the Catamenial Periods of Patients who have been Subjected to Porro's Operation.—*La France Medicale* reports M. Abel Damour's communication to the Clinical Society on his observations of thirty cases where Porro's operation has been successfully performed, which number embraces about half of all that have survived the operation, as there were only 62 living women. In 23 of these cases the menopause followed the operation without any of the phenomena indicative of a return of the menses. In 8 of the cases, painful sensations alone, or accompanied by a catamenial discharge, were noted. These painful sensations consisted of flushes of heat, a feeling of fullness, cramps, cephalalgia, general fatigue, oppressions, tendency to syncope, disturbance of vision, and noises in the ears.

In a patient operated upon Dec. 30, 1879, by Dr. Championniére, in March, 1880, on going to the

close-stool, she passed about half an ordinary glassful of fluid blood, by the rectum, and this was repeated five times at intervals of two months at the proper menstrual period. Otherwise there were no general indications of pain. There were no hæmorrhoids. Dec., 1883, the patient while urinating passed several red clots, and a small quantity of yellowish blood. Urination was painful, and this was the last manifestation of menstruation. A patient operated on by Prof. Porro, May 21, 1876, had during four days of the menstrual epoch a swelling of the cicatricial tissue of the pedicle and a discharge of a thick, ropy, limpid fluid. In two cases of Prof. Braun, there was in one a single vaginal hæmorrhage, in the other a monthly hæmorrhage, which continued periodically. Prof. Tarnier's case lost quite a considerable amount of blood during two days, five months after the operation. In two cases of Prof. Breisky, one suffered from three attacks of hæmorrhage, without any lung trouble being diagnosticated, the other had two attacks of vaginal hæmorrhage at menstrual epochs. Dr. Ramello, of Turin, operated upon a case July 3, 1880. On Jan. 17, 1884, he states that his patient has enjoyed excellent health ever since the operation, but that on the first day of each month, at the period corresponding to the menstrual epoch, she suffers from a slight headache, which is followed by epistaxis. Prof. Breisky noted in a third case that at each month there were pains in the breasts.

SURGERY.

MODE OF LIMITING INJECTIONS TO THE ANTERIOR URETHRA.—M. P. Aubert, in the *Lyon Medical*, recognises the division of the male urethra by the subpubic sphincter into the anterior urethra and the posterior urethra. The most serious complications of blenorrhagia come from the passage of inflammation to the posterior urethra, as there it can readily extend to the epididymis or bladder. Among the causes which facilitate or provoke directly this extension to the deeper part of the canal, are injections. The bad effect of these injections results from the mode in which they are used. If practised upon the open canal, they do not penetrate deep enough to involve the whole of the anterior urethra. If practised upon the closed canal, the tension of the fluid overcomes the resistance of the urethral sphincter, and the contagion is carried to the deeper portions by even the most innocent fluids. To overcome these difficulties, Aubert takes a thin rubber tube of a caliber much smaller than that of the urethra, and of the length of 10 to 12 centimeters, and after having oiled it, he introduces it into the urethra, the nozzle of the syringe is attached to its free end and the injection is proceeded with. This carries the injection to the bottom of the anterior urethra, and as the tube does not fill up, the whole of the canal and the meatus externus is not compressed, the liquid makes it escape without passing the urethral sphincter, and washes thoroughly that portion of the canal which is anterior to it.

MEDICINE.

SCARLATINA AS A CAUSE OF PUERPERAL SEPTICÆMIA.—Dr. F. P. Atkinson, in a short article in the *Practitioner*, argues as follows against the probability of puerperal fever having its origin in scarlatina:

1. Cases have over and over again been reported where the parturient woman has been the subject of scarlatina, and the peculiar symptoms of puerperal septicæmia have been entirely absent, and also where there have been cases of scarlatina, not only in the same house, but in the same room, and even in the same bed with the parturient woman, without the occurrence of any ill effects.

2. He has been creditably informed by a medical man that he (the medical man) was once called away from a case of scarlatina he was watching, to attend two cases of midwifery, and that neither of the lying-in women had any unfavorable symptoms afterwards.

3. He was also told that one medical man attended three cases of confinement when his hands were freely peeling from scarlatina, and that not one of these cases had anything the matter subsequent to their confinement.

In spite of these facts, he believes that serious harm might result, were pus from the ulcerating surface of the tonsils to come in contact with an abraded surface of the uterus or vagina.

His treatment for puerperal septicæmia, he sets down as quinine, two or three grains, with five minims of the tincture of digitalis, alternating every two hours with from three to five grains of resorcin. Ice-bags to the head and spine, body sponging with vinegar and water, and uterine syringing with a solution of permanganate of potash, three or four times daily. Plenty of good liquid nourishment and brandy.

FOOT-AND-MOUTH DISEASE IN THE HUMAN SUBJECT.—The *Lancet* tells us of a very remarkable epidemic of aphthous sore-throat in Dover, England, which seems to have been connected with foot-and-mouth disease in a dairy. In all there were 144 attacks; 130 receiving their milk from the dairy in question; this dairy received a partial supply from a country dairy where the disease was prevalent, and the customers supplied with this milk all suffered, and 14 persons in addition, who had their supply from the country dairy itself. The special influence of cream, as conveying the *materies morbi*, was shown by the fact that the proportion of attacks in adults, as compared with children, was large, and many adults who took no milk had partaken of cream in their tea. The symptoms of the sufferers were shivering, followed by headache and fever, pains in the limbs, parched lips, and a vesicular eruption in the throat. In some cases the tonsils were enlarged, and in others they separated, the process being accompanied by enlargement of the glands. The medical officer of health is preparing a report based upon a careful investigation, and it will be interesting to note if any were attacked who did not partake of the milk, and thus as secondary cases show the presence of personal infection.

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THE EDITOR of this JOURNAL would be glad to receive any items of general interest in regard to local events, or matters that it is desirable to call to the attention of the profession. Letters written for publication or containing items of information, should be accompanied by the writer's full name and address, although not necessarily to be published. All communications in regard to editorial work should be addressed to the Editor.

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SATURDAY, APRIL 19, 1884.

REDUCTION OF DISLOCATIONS BY MANIPULATION.—In this journal for April 5, 1884, we inserted a short article on this subject under the head of original communications, by Dr. M. M. Louis Hutchinson, whose titles would indicate that he had received his education on the other side of the Atlantic. One of the leading motives for inserting the article was to make it the occasion for correcting the erroneous views the writer entertained concerning the status of surgical progress in this country.

Concerning the reduction of dislocations by manipulation, Dr. Hutchinson makes the singular assertion that the subject is seldom lectured upon in the medical colleges, and that very little attention is given to it in the text-books and other works on surgery. So far is such a statement from being true, that we doubt whether there is a regular medical school in this country, in which a course of lectures on surgery has been given at any time during the last twenty years, that did not include direct and full instruction concerning the reduction of dislocations, especially at the shoulder and hip, by manipulation. Prof. H. H. Smith, of the University of Pennsylvania, reduced a luxation of the humerus by this method, and published an account of it in the *Medical Examiner* of Philadelphia in 1858. He also gives full instruction on the subject in his valuable work on "The Principles and Practice of Surgery," published in 1863. Prof. Daniel Brainerd, of Chicago, who died in 1866, had for several years before his death, both practiced and taught this method of reduction, as applied alike to the heads of the humerus and femur.

In regard to the reduction of dislocations of the femur at the hip by manipulation the attention of the profession was first prominently arrested by a very valuable paper contributed by Dr. W. W. Reid, of Rochester, N, Y., and published in 1857. Since the publication of that paper by Dr. Reid concerning the reduction of dislocations of the hip by manipulation, and the case of dislocation of the humerus at the shoulder, published by Dr. Smith in 1858, this method of reduction has been as familiarly taught, both in the medical schools and works on surgery, in this country, as any other important item of surgical knowledge.

PROFESSORIAL CHANGES.—It is understood in professional circles in Philadelphia, that at the close of the present college term in the medical department of the University of Pennsylvania, Prof. Alfred Stillé will positively retire from the chair of Practice of Medicine, and will be succeeded by Dr. Wm. Pepper, the present Provost of the University. The one has well earned his right to a seat on the higher plane of honorable retirement, while the other is equally fitted to enter upon the active duties of one of the most important positions to be found in the profession.

At a recent meeting of the Faculty and Trustees of the Chicago Medical College, Dr. W. H. Casselbery was appointed Professor of Materia Medica and Therapeutics, Dr. W. W. Jaggard Adjunct Professor of Practical Obstetrics, and Dr. F. S. Johnson Lecturer on Histology. These gentlemen had been giving instruction in their respective departments during the past college term with more than ordinary ability and success.

DOES ALCOHOL UNDERGO COMBUSTION IN THE HUMAN SYSTEM?—In the brief clinical lecture on the use of the fats, or Oils and Alcohol in the Treatment of Pulmonary Phthisis, in the present number of the JOURNAL, the lecturer speaks of the action of alcohol as though its combustion in the living system was an established fact; and even informs his class of the quantity of heat that would be evolved from the combustion of a given number of grammes of alcohol. He appears to be still living in the palmy days of the chemico-physiological doctrines of Baron Liebig, and of course is oblivious to the fact, that all the experiments of the last quarter of a century demonstrate, first, that nearly all the alcohol taken into the living human system, instead of undergoing combustion, is eliminated unchanged through the lungs, skin, and kidneys. The late Dr. Anstie, after the most persistent and extensive experimental research, could show

the retention of only from 30 to 45 cubic centimeters (fl. ℥j to ℥jss) of alcohol, in the adult human system in the twenty-four hours. And second, that even this small amount did not disappear by any process of combustion, was made evident by the fact that the temperature, as shown by the clinical thermometer, was lowered instead of increased during the time the alcohol was retained. That alcohol, while present in the human system, circulates in the blood unchanged, and by its presence, retards molecular movements, lessens the exhalation of carbonic acid gas, as well as all other products either of combustion or of tissue changes, and also diminishes both temperature and nerve sensibility, has been proved by observations and experiments so numerous and varied, during the last half century, that we had supposed the purely chemical theories of a past generation had become obsolete, at least, at the bedside of the sick.

HYMENEAL.—In the column of miscellaneous items of the present number of the JOURNAL, will be found a notice indicating that the genial and well-known permanent secretary of the American Medical Association has been taking to himself a "better half;" thereby not only renewing the joys of youth, but providing against the loneliness of solitary age. We tender to both parties our cordial congratulations, and the earnest wish that life, to them, may be long and happy.

RAILROAD FARE TO WASHINGTON.—All delegates and members of the Association intending to attend the meeting in Washington on the first Tuesday in May, will find matter of interest to them under the head of special notices in another column of this journal.

IS IT consistent with the By-laws for officers and members of the Association to furnish copies of the addresses, reports, and papers they may present at the annual meetings, to such medical journals *as they choose, or to the daily* secular press?

We answer this question by copying, for the information of all parties, the following paragraph from Section IV of the By-laws:

"Every paper received by this Association and ordered to be published, and all plates or other means of illustration, shall be considered the *exclusive property* of the Association, and shall be published and sold for the exclusive benefit of the Association." (See Trans. Vol. 33, p. 628.)

Also as bearing on the same question, we republish the following resolution adopted by the Association at the meeting in Cleveland, June 6, 1883:

"*Resolved*, That the Board of Trustees are hereby instructed to proceed with the publication of the JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION, at as early a day as practicable, to take the place of the annual volume of Transactions and that the duties formerly devolved upon the Standing Committee of Publication be transferred to the Board of Trustees; and that the Secretaries of the Association *during or immediately* after each annual session, be required to transfer to the *editor of the journal the record of proceedings, addresses, and all written reports of committees and officers, papers and contributions*, that may be referred for publication, either in *general sessions* or in any of the *Sections*."

SOCIETY PROCEEDINGS.

THE CHICAGO GYNÆCOLOGICAL SOCIETY.

Chicago, March 28, 1884.—The Chicago Gynæcological Society held its regular monthly meeting, Friday evening, the 28th ult., in parlor 44, Grand Pacific Hotel.

Dr. E. C. Dudley reported verbally a case of Ovariotomy, Complicated with General Miliary Tuberculosis of the Peritonæum. He presented to the society a very interesting specimen, an ovarian cyst, which he had successfully removed two months before at Nora Springs, Iowa. The case had been reported to him by Dr. S. G. Blythe, of Nora Springs. The patient was 23 years of age; had been married two and one-half years; had always suffered from dysmenorrhœa; had never been pregnant. In September, 1883, she noticed some enlargement in the left inguinal region. She had previously suffered from inflammation of the left broad ligament. Dr. W. H. Byford, of Chicago, seeing her at this time, diagnosed pelvic abscess. She subsequently consulted Dr. D. A. McCallum, of Montreal, who, in the following December, diagnosed ovarian cyst. Patient reports that this cyst grew rapidly, and a few weeks later disappeared, apparently by rupture of its wall and the discharge of its contents into the peritoneal cavity. Dr. Dudley did not question the probability of this occurrence, because he had previously operated successfully upon a case in which the patient had, during the five months preceding the operation, suffered five times from rupture of the cyst wall and discharge of its contents into the abdominal cavity, with resulting peritonitis each time. In the Nora Springs case, the cyst gradually refilled, till the summer of 1883, after which the increase was more rapid. In December, 1883, patient suffered from a serious attack of peritonitis which threatened her life. From this she recovered; operation under ether (Jan. 23, 1884) lasting one hour and fifty minutes; present Drs. S. G. Blythe, J. Q. Adams, of Nora Springs, Iowa; N. L. Kean, of Norwood, Iowa; and Christian Fenger, of Chicago. Incision in the median line, between the umbilicus and symphysis pubis, four and one-half inches long; weight of tumor, twelve pounds; fluid thin, opaque, yellow. This fluid was by accident thrown away, so that no adequate examination was made; tumor mono-cystic; left side thick walls. Upon opening the abdomen, the entire peritonæum, parietal, intestinal and omental, as well as that covering the tumor, was found extensively involved in miliary tuberculosis. A small cyst of the right ovary of the size of a hean's egg, with thin walls, also covered with evidence of tubercular peritonitis, was not removed; adhesions very extensive and very firm, parietal, intestinal and pelvic; pelvic adhesions being universal. The pedicle was severed near the uterus, and treated by intra-peritoneal ligature and cautery. A large double soft rubber, perforated drainage tube was introduced through the lower end of the wound, and carried into the cul-de-sac of Douglas. The operation was completed at 2 P. M.,

patient placed in bed and surrounded by hot bottles; extremities warm; condition apparently good; slight vomiting of bile; pulse 130; axillary temperature 99.

January 24. 1 A. M.—Vomiting incessant; extreme sense of suffocation; pulse 156, very feeble; jactitation; extremities cool; pain in the distribution of the cœliac axis; collapse seemed imminent; brandy in tablespoonful doses was given by stomach, and in two-ounce doses by enema; but the temperature, taken in the vagina, registered 103, and this fact alone deterred the operator from opening the abdominal wound to look for secondary hæmorrhage. 4 A. M., pulse 140, and all the symptoms less urgent; patient asked for more brandy, which was given by enema; 8 P. M., pulse 132; axillary temperature 100; vomiting had ceased; had had a very comfortable day; had passed flatus downward.

January 25, 8 A. M.—Pulse 120; temperature 99. 8 P. M., pulse 121; axillary temp. 99.3; brandy and milk have been freely given and retained; large amounts of bloody serum have passed through the drainage tube.

January 26.—Condition substantially the same; nothing passed through the drainage tube, and it is removed; the patient continues to an uninterrupted recovery.

The operation was in the strictest sense performed with antiseptic precautions. The spray was not used except in the room before the operation. The opening through which the drainage tube had protruded, now, two months after the operation, is not closed, and is reported by Dr. Blythe to discharge constantly large amounts of ascitic fluid. Dr. Dudley is now in doubt as to the propriety of attempting to close this opening, not knowing whether some of the fluid now discharged through it would not, if the opening were closed, be reabsorbed into the circulation, and in this way prevent the constant drain upon the patient's vitality. He was of the opinion that the original diognosis of pelvic abscess by Dr. Byford was probably correct, and that the tumor may, therefore, have been of inflammatory origin. He then introduced Dr. Christian Fenger (present by invitation), who made the following remarks upon the pathology of the case:

The specimen was exhibited before the society, and examined by Prof. Christian Fenger, Surgeon Cook County Hospital, and Prof. of Pathology and Diseases of the Genito-Urinary Organs, Chicago Medical College. During the examination Dr. Fenger observed: There is nothing peculiar about the inside of the cyst. It has a few cauliflower excrescences about it, which, of course, is a common thing. Microscopical examination of this specimen shows nothing but the usual cylindrical epithelial papillomatous formations, of the same structure as cylindrical epithelial carcinoma. Some small nodules in the wall are fibrous, but there is no tubercular tissue in them; consequently there is inside of the cystoma no signs of tuberculosis. Outside of the cyst you can see miliary tubercles. There are miliary tubercles all over the cyst, all over the peritonæum, and intestines, in fact everywhere all over the whole peritoneal cavity. When the attack is recent, the tubercles are always miliary. There is one point, however, more remarkable here, that is the condition of the fallopian tube. It is enlarged, the walls thickened considerably, and the lumen larger than usual. Microscopical examination shows all over in the walls and mucous membrane miliary tubercles, with the characteristic giant cells. It is worth while to call your attention to these peculiarities. It is possible, although it can't be proven, that this is the primary tuberculosis, and the miliary tuberculosis of the peritoneal cavity is the secondary. Miliary tuberculosis of the peritonæum will not creep down into the fallopian tubes, go through the mucous membrane so very easily, and cause tuberculosis, That is not the way in which the trouble generally arises. It is much more common that there is a primary conglomerated tuberculosis of the uterus and a secondary miliary tuberculosis of the peritonæum. It would take too much time to go further into this question, besides, it would not be of much use, but there is another point which this class of cases call forth very strongly, and that is the following: At the time, when the operation was over, and we knew that there was acute, diffuse miliary tuberculosis of the peritonæum, then we naturally asked ourselves, what does this mean, in reference to her recovery from the operation? We could not answer anything concerning that question, so to speak. The statistics of Spencer Wells furnished one single case out of a thousand, in which the patient, a single woman, 23 years old, died one hundred and fourteen hours after the operation from tubercular peritonitis. This is all we could get from that source. Of course, the few remarks I make here to-night are based on what I have been able to find in the literature, and possibly other members of the society have found the same thing, on the influence of miliary tuberculosis of the peritonæum on operations in the peritoneal cavity. First; let us look one moment at the view of miliary tuberculosis of the peritonæum as held up to 1880.

In Ziemssen's Encyclopædia, whose literature comes down into the seventies, the writer says concerning tuberculosis of the peritonæum, that as a rule, it takes a chronic course, and explains what is meant by chronic, by weeks or months after the diagnosis is made, and then sure death. The disease is always fatal, either from ascites and marasmus or miliary tuberculosis in other organs. As to opening the abdominal cavity in tuberculous peritonitis, he does not dream of that. He says if ascites is abundant, puncture of the abdomen to relieve symptoms can be resorted to, but the puncture causes fresh inflammation, and is apt to cause considerable hæmorrhage into the peritoneal cavity. He of course does not write this, without consulting all of the literature of miliary tuberculosis, or simply tuberculosis of the peritonæum, which he has had access to. Lately, however, there have been reported some cases where tubercular peritonitis has been met with in abdominal operations, and these cases seem to contradict altogether what we used to believe up to 1880.

Prof. Küster, of Berlin, out of whose article on iodoform treatment of wounds of the abdominal cavity I simply take one remark, says, that Schröeder has told him, that he has met with peritoneal tuberculosis while performing ovariotomy, and that he

powdered the tubercular peritonæum with iodoform, and the patient recovered without any trouble. This is all I know about ovariotomy in a tubercular peritoneal cavity.

Now, it happens that a few weeks ago an article on this very same subject was written by Kœnig. The article is on "Tubercular Peritonitis Simulating Abdominal Tumors." Three cases are cited, as follows:

October 15, 1883, a woman came under Kœnig's care. A couple of months previous she had distension of the abdominal cavity, loss of appetite, and loss of flesh. When she was examined, there was found above the symphysis a fluctuating tumor; percussion elicited dullness in the median line; clear percussion note on the sides. Laparotomy was made, but when the wall of the abdomen was cut through, he came into a cavity filled with a not very clear serum, and fibrinous masses. A layer of fibrinous masses covered the uterus and ovaries, as far as forming the wall of the cavity. This material was scooped from the uterus and from the walls of the abdomen and intestines, as far as he dared to. Examination showed it to be tuberculous. The cavity was then washed out with carbolic acid, and powdered with iodoform, and the abdominal wound closed as usual. This occurred on the 15th of October. On the 16th of November she was sent from the hospital, with no fever, normal appetite, and all the indications of complete restoration to health.

The next case was that of a woman 30 years of age, who had had three children. Four months before coming into the hospital, the abdomen had enlarged some, and two months before, the menses stopped. When she came in there was a fluctuating tumor extending from the symphysis to the umbilicus; the intestine lay behind the tumor; the uterus was retroflected; at the left side the ovary could be felt; at the right side of the uterus a solid tumor could be felt, the size of an orange, to which fluctuation from the tumor was transmitted. The urine contained some pus and some albumen. Laparotamy showed tuberculosis of the peritonæum, and the incision led into a cavity, in which was the same kind of serous fluid as in the other case; in the posterior part of the cavity were found the intestines, ovaries, and uterus, covered with the same kind of material as in the other case. The wound was treated in the same way, washed out with carbolic acid, powdered with iodoform, and a drain inserted. She recovered with no reaction whatever, but there was for a long time suppuration from a fistulous opening, which finally closed up. The abdomen was in a normal condition, and the patient was able to do her work again. One year after the operation, there was a tumor of medium size, which afterwards disappeared. Two years after the operation, this woman was perfectly healthy and able to do her work.

The next case was that of a woman with a tumor in the right side of the abdomen. When the patient came into the hospital there was, in the right half of the abdomen below the liver, and reaching from here down in the lumbar region, an oval, painful tumor, of the size of the fist. It was supposed that patient had a tuberculous kidney, that was floating, as was thought, and to demonstrate its presence an incision was made in the lumbar region, but a healthy kidney was found, and consequently the wound was closed. An incision was made in the median line, and he found the ascending colon surmounted by tuberculous nodules, enough to form this tumor. There were miliary tubercles all over the peritonæum. The operation had no serious consequences for the patient. She recovered from it in October, 1881, but in March, 1882, she died from general tuberculosis.

The fourth and last case was a girl 23 years old, with tuberculosis in her family; always healthy before, and only a couple of months before she came into the hospital the abdomen had enlarged. The medical attendant felt a fluctuating, round tumor the size of an egg upon the right side; menses normal.

Kœnig found, when he saw her, the abdomen enlarged, somewhat elastic, and in the left side above Poupart's ligament, a small elastic tumor, and two smaller tumors could he felt from the vagina as well as from the rectum? As these tumors enlarged and were painful, the peritoneal cavity filled up with ascitic fluid, an exploratory incision was made. A quantity of bloody serum was taken out, and all over the peritonæum numerous tuberculous knuckles were found. The omentum and intestines were covered with nodules, not miliary tubercles, but conglomerated tubercles of a larger size and beside these, thousands of miliary tubercles all over the peritonæum. The wound was united after the peritonæum had been washed out and powdered over with iodoform. Recovery took place three weeks after the operation. Since this was published four months have elapsed. The patient is getting stronger, and feels at the time of publication perfectly well. I refer to these cases because they have been very interesting to me, as showing the sudden change which has taken place in the aspect of tubercular peritonitis, and as proving that we need not feel so much alarm as we have heretofore the next time we meet with tubercular peritonitis, in any operation of the peritoneal cavity. Neither Kœnig nor anybody else would, of course, dare to recommend laparotomy for tuberculous peritonitis as a justifiable operative procedure. But it may be a question for somebody else to solve, whether it is beneficial in tuberculous peritonitis to have the abdomen opened and iodoform sprinkled in the cavity.

Dr. A. Reeves Jackson, President:

I feel an unusual degree of interest in the case which has been detailed to us, and in the accompanying specimen; also in the cases cited which seem to have a bearing upon it. Of course the interest centers in the pathological condition of the peritonæum. A case of similar character occurred to myself about nine years ago, in which was disclosed a state of the peritonæum such as has been described here to-night. It was an operation for removal of an ovarian cystoma, and as I turned back the lips of the abdominal incision, the appearance of that portion of the peritonæum covering the anterior and lateral abdominal walls alarmed me. I had never seen anything like it before, nor have I seen anything like it since until to-night. The affected portions of the peritonæum

were studded with thousands of little round, smooth bodies, averaging about the size of the ova of the shad, although some were smaller and some rather larger. They appeared to form a layer, beneath the epithelium. They were yellowish-gray in color, distributed on a steel-gray field. There was no redness of the peritonæum, and no peritonitis. Although I did not understand the nature of the condition, I considered it serious, and thought the case would be fatal. During the few days succeeding the operation there were three attacks of septicæmic symptoms, caused apparently by a recurring collection of bloody serum in Douglas' *cul-de-sac*, and which was each time relieved by puncture and evacuation. The patient recovered, and I saw her a year ago, a large, robust, healthy woman. I now suppose the little round bodies I saw were miliary tubercles; that their presence was caused by the irritation of the growing tumor.

Rindfleisch in speaking of miliary tubercle of the peritonæum, states that it originates in, and is usually confined to, the epithelium, although it may extend to any part in which connective tissue exists.

Dr. Wm. H. Byford.—Mr. President: I feel that the society owes Drs. Dudley and Fenger great obligation for the presentation of this subject in the manner they have, and I, for one, have been exceedingly interested in the case, and in the research made by Dr. Fenger in the literature of the subject. Of course I cannot be expected to say much upon the subject of tuberculous peritonitis; in the first place, because the subject is new, and in the next place, I have noticed such conditions in but one case. Seven years ago, last 4th of July, I was called to Iowa to operate upon a Norwegian woman who had an enormous ovarian tumor, weighing about 40 pounds. She was a good representative of the consumptive patient. She had begun to expectorate. Sometime before that there had been hæmatemesis. She was emaciated to the very last degree. Upon opening the abdominal cavity, a large amount of fluid escaped—5 to 10 pounds. The serum was not much out of the way in color. The tumor disclosed was of the multilocular variety, with one large cyst. On examination, the surface was found studded over with these small deposits, which I then believed to be simply fibrous, resulting apparently from ordinary inflammation. There was also in the fluid coming from the peritoneal cavity a large amount of flocculi of different shapes—round like shot, flat pieces, and elongated strings, amounting to several ounces. This induced me to believe that there was peritoneal inflammation, but it did not strike me then as being tuberculous. I did not examine microscopically. I now believe this patient had tubercular peritonitis. The tumor was removed the 4th of July. I put a drainage tube of rubber in lower end of the wound and left the patient in, as I thought, a moribund condition. Her pulse was exceedingly small and weak, and her face exceedingly pale. I had, however, two very skilful attendants to put in charge of the patient after I left. About three months after the time of the operation the patient was able to sit up, after long treatment by tonics, nutritious diet and hygienic measures. Drainage from the abdomen must have kept up over 6 months. It was certainly open several months. I saw the husband of the patient about 3 months ago, and he told me the cough gradually subsided, expectoration became less, she had gained flesh, and that she was a very healthy woman. I have had opportunity to see no other case that resembled anything like the appearances in this cyst, and I have operated about 150 times.

In relating the history of the case, Dr. Dudley mentioned the assertion by the patient that the tumor had bursted, that fluid was effused into the peritonæum, and that it had recurred again. I think this is not of very uncommon occurrence. I have noticed it a number of times in my life. Tumors of considerable size have appeared in the abdominal cavity, apparently disappeared, and in the course of some months fill up again, and finally have to be removed. I remember of removing two tumors from a patient wherein this same thing had occurred. I was glad to hear Dr. Dudley say that the diagnosis I made when I first saw the patient was probably true, and that the cyst may have originated from inflammatory conditions. I believe that occurrence often takes place. I do not mean to say the number of cases would be proportionably large, but that this condition occurs occasionally. I think I have known cases of the kind, where the symptoms of inflammation preceded for some months the ovarian tumor, and that where the tumor finally showed itself to result from inflammation. I would like to mention to the society as confirmatory of this probable method of origin of the tumor, the fact that during the last meeting of the American Gynæcological Society, I read a paper upon the subject of Pelvic Abscess, in which I took the ground that an abscess might be converted into a serous cyst, and mentioned a case under observation. I think it will be found in the future, by close observation, that sometimes ovarian cysts do originate in this way.

Dr. E. W. Sawyer—The report of the case, and remarks of the gentlemen who have preceded me, have been particularly instructive and interesting. The gynæcological aspect of the case I do not feel competent to discuss. If it is in order, however, to speak of the disease, so prominently mentioned in this case, I would like to confine my remarks to miliary tuberculosis. I have really been surprised at what I have learned here to-night. Living in the East and following the hospitals in New England exclusively, I have received different ideas on miliary tuberculosis from those expressed here to-night. First, I have been taught with great emphasis that miliary tuberculosis was an acute disease. I well remember the graphic manner in which Prof. Ellis was wont to describe and speak of cases of miliary tuberculosis before the class. * * * * The hospitals and private practice afforded numerous instances for the study of chronic catarrhal pneumonia, phthisis pulmonalis, many of these cases being the subjects of miliary tuberculosis. In the surgical wards, I have more than once seen cases of tuberculous testicle in which the victim died with miliary tuberculosis; in children also with basilar tuberculosis; in fact, under

all circumstances, the course of the disease was short. Such a thing as chronic miliary tuberculosis had never occurred to me before to-night; on that account, this meeting has been particularly interesting to me. Heretofore I would not have hesitated to make an unfavorable prognosis. I should have felt certain that death would have supervened quickly; not a matter of months, as stated to-night, but a question of but a few days or weeks.

Dr. S. then related the history of several cases terminating fatally in a few days, and in which the autopsy revealed tubercles in different organs, remarking that the evidence which these cases afforded confirmed him in the belief that miliary tuberculosis was an acute disease, and always fatal.

Dr. Fenger, in reply to Dr. Sawyer, expressed the opinion that miliary tuberculosis of the lungs is always acute; about the brain he did not know any more than others say, who have seen cases occur. Miliary tuberculosis of the serous cavities is not so acute; for instance, miliary tuberculosis of the pleural cavities. We know from experience it is not very quickly fatal, in no way so severe as in the lungs. Furthermore, tuberculosis of the serous cavities is a local affection, while tuberculosis of the lungs, for reasons which are apparent, is a constitutional malady.

CHICAGO MEDICAL SOCIETY.

The Chicago Medical Society held its annual business meeting in the parlors of the Grand Pacific Hotel on the evening of April 7, 1884, with Dr. D. W. Graham, President, in the chair, and Dr. L. H. Montgomery, Secretary.

There were present 88 members at the meeting, and there were heard the annual reports of the Secretary-Treasurer, the Committee on Library, the Auditing Committee, and reports of outstanding committees, all of which were duly received, and show the Society to be in a most flourishing condition, as may be seen from the appended report of the proceedings. The meeting concluded by electing officers for the ensuing year and appointing delegates to the American Medical Association, most of whom have pledged themselves to attend.

After the reading of the minutes of the last meeting, which remained approved as read, the Secretary's annual report of the proceedings of the Chicago Medical Society for the current year ending April 7, 1884, was presented:

Mr. President and Members of the Society:

During the year we have held nineteen regular meetings and one special meeting. Thirty-eight scientific essays and papers, written by thirty members, and a number of reports of cases in writing, have been presented with a larger number of pathological specimens than during any former year for a very long time, besides several instruments and mechanical appliances that have been exhibited.

Five hundred and four members and 134 visitors have attended twenty of the meetings, being in all 638 physicians and students, compared to 450 members and 120 visiting physicians, or 570 persons, in attendance during 1882, and 304 members and 99 visitors, or 403 persons in 1881.

The largest number in attendance at any of the meetings was about 100. The smallest number that attended any of the meetings is only 12. The average number of members in attendance at each meeting is $24^{14}/_{20}$, of guests $6^{14}/_{20}$, or a total of $31^{8}/_{20}$ compared to 30, the average number that attended the Society the year previous, and 24, the average attendance during 1881.

We have received into active membership 35 new members, (this number does not include the accessions this evening, which number 8), compared to 34, the number admitted in 1882, and 18 elected to membership during 1881; or 87, the entire number received in the Society during the three years' time of the present incumbent's *regime*.

The membership list one year ago consisted of 210 members, and 181 constituted the number at the close of the year 1881. An increase of 35 during the year would make the total membership 245. Of this number one has passed to the silent land, one resigned, and one left the city. This number of 3 deducted will leave a correct and accurate list of 242 members constituting this Society. There are others who have removed from the city that wish to retain their membership, so that out of our total membership some 6 or 8 are non-resident members, to which a reference will be added later.

Perhaps no part of the records will find more ready appreciation than the faithful *verbatim* reports of the discussions. I say faithful, as implying, as near as possible, that of a retentive memory, in addition to the comprehensive notes that were taken at the time of debate. And as discussion is clearly an important feature of our sessions, where they have appeared in print, an endeavor has been made to give to the profession everywhere most clearly the individuality of the members, and the views of those who participated, without partiality being shown to any one. The list of papers includes a varied assortment of topics, the best that has ever been written by the members and presented here. Doubts are entertained if there is a local scientific society in our country that has a better showing in this direction, if more than a few equal us in this respect. In many of the papers there was so much value, that they have been sought by other associations and re-read, as well as being quoted, in every instance in abstract form or in their entirety, in several medical journals.

A number of important committees have been appointed during the year, one of the most important of which is the Committee on Library. A review of their work has also been embodied in this report (for fear, perhaps, that they would not be present or prepared), but I notice its chairman present, and you will therefore hear from him in detail a more interesting report than this one.

Twenty delegates from this society attended the meeting of the American Medical Association in Cleveland last year, besides the other permanent mem-

bers of the Association from this society who attended, swelling the number to 34.

LISTON H. MONTGOMERY, Secretary.

65 Randolph St., April 7, 1884.

Upon motion by Dr. E. Andrews, duly seconded, the report of the Secretary, just read, was received and placed on file.

Synopsis of First Annual Report of the Committee on Library to Chicago Medical Society; Edmund Andrews, M.D., LL.D., Chairman:

APRIL 7, 1884.

Mr. President and Members of the Committee:—Your committee beg leave to submit the following report:

The value of money, books, and pledges placed at our disposal are as follows, viz.:

Appropriated by the society	$500.00
Contributed by physicians, dentists, and druggists	317.00
Money pledged by four gentlemen to meet transportation of books from Europe and other expenses	50.00
One hundred and ten volumes of books donated by various parties. Estimated cost value	155.00
	$1,022.00

Of the cash above stated, we have expended the following sums:

Paid W. T. Keener, of which $500 was paid by the Treasurer of the society according to the appropriation	$528.15
Paid for postage both ways on circulars sent to 1,500 men	63.00
Paid for stationery and printing	15.45
Paid for express charges and sundries	2.50
	$609.10
Which sum deducted from $817, the amount actually collected as above stated, leaves cash on hand	$207.80

This latter sum, with the $50 pledged by the four gentlemen, will more than cover the cost and transportation of books which we have ordered from Europe. The precise cost of the transportation cannot be ascertained beforehand. Several well-known works are omitted because new editions are about to appear, which will be best to defer purchasing until next year.

By careful economy of the funds, we have been able to purchase the Great French work, called the Dictionere des Sciences Medicales. One hundred and twenty "half volumes" are now out, and the rest will soon be issued. This magnificent work will give us the best thoughts of the French profession on every medical and surgical topic.

Then followed a list of 149 volumes purchased, with a list of 11 of the representative journals purchased.

The following journals have been donated: *The Chicago Medical Journal and Examiner*, THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION, *The Weekly Medical Review.*

Mrs. George C. Clarke has donated 62 bound volumes, being a portion of the library of her father, the late Dr. J. W. Eldridge, one of Chicago's earliest eminent physicians. This collection is valuable, because it gives us almost the beginning of American, and some early English medical literature, many of the books being published in the previous century. Others having donated or contributed books, are: W. T. Keener, 3 vols.; Dr. Adam Miller, 1 vol.; Dr. R. B. Treat, 9 vols.; Dr. R. Ludlam, 9 vols.; Parke, Davis & Co., 11 vols.; Dr. A. B. Stockham, 3 vols.; Dr. A. H. Foster, 3 vols., worth at new price $30; Dr. Justin Hayes, 1 vol.; Dr. H. P. Merriman, 6 vols.; Anonymous Donor, Godding's Two Hard Cases; Dr. E. Andrews, 3 vols. The summary of volumes: Bought of W. T. Keener, 160 vols.; ordered from Europe, but not arrived, 74 vols.; books donated, 110 vols.; total, 344 vols.

We find an increasing interest and enthusiasm on this subject on the part of the profession, and plans have been laid before us for raising very much larger sums annually for a period of years.

It will be an easy thing comparatively to place on the shelves 25,000 volumes of medical works.

The authorities of the Public Library coöperate with us more cordially, and are now diligently at work cataloguing and shelving the books preparatory for use. In accordance with the advice of the society, which we heartily endorse, the Librarian will keep the books always ready for reading in the library, *and not loan them out.*

Very respectfully submitted,

E. ANDREWS, Cha'n
F. C. HOTZ,
OSCAR C. DE WOLF,
} Committee on Library.

Upon motion duly seconded, the report was received, accepted, and placed on file.

Dr. Edmund Andrews offered the following:

Resolved, That the thanks of this society be presented to Mrs. George C. Clarke, for the donation of 62 volumes of medical works for the Public Library, which was received with plaudits, and the resolution unanimously carried.

The following officers were elected for the ensuing year:

Dr. D. A. K. Steele, President.
Dr. Charles W. Purdy, 1st Vice-President.
Dr. Curtis T. Fenn, 2nd Vice-President.
Dr. Liston H. Montgomery, Secretary (re-elected).
Dr. E. Fletcher Ingals, Treasurer (re-elected).

Drs. Wm. E. Quine, G. C. Paoli, and D. R. Brower, committee on membership and miscellaneous business.

Dr. D. W. Graham, to fill vacancy on Library Committee, caused by Dr. Oscar C. DeWolf's time expiring.

The following delegates from the Chicago Medical Society were elected at the annual meeting of the Society, April 7th, 1884, to the American Medical Association for the year 1884.

Dr. F. M. Wilder,	Dr. W. T. Montgomery,
Dr. W. W. Allport,	Dr. E. F. Ingals,
Dr T. W. Miller,	Dr. C. T. Parkes,
Dr. R. E. Starkweather,	Dr. E. Burrons,
Dr. N. E. Rice,	Dr. A. Reeves Jackson,

Dr. J. G. Kiernan, Dr. Frank Billings,
Dr. J. F. Todd, Dr. E. F. Gaston,
Dr. W. E. Clarke, Dr. C. S. DeVeny,
Dr. Simon Strausser, Dr. C. J. Simons,
Dr. A. H. Cooke, Dr. Philip Adolphus,
Dr. J. E. Walton, Dr. T. W. Brophy,
Dr. J. S. Marshall, Dr. H. J. Reynolds,
Dr. L. H. Montgomery, Dr. J. H. Chew,
Dr. C. W. Chaffee. Dr. E J. Doering,

After the transaction of much additional business, including the presentation of the reports of the Treasurer and Auditing Committee, the society adjourned. LISTON H. MONTGOMERY, M.D., Secretary.

STATE MEDICINE.

STATE BOARD OF HEALTH OF CONNECTICUT.

BY DR. C. W. CHAMBERLAIN, SECRETARY.

MORTALITY IN FEBRUARY, 1884.

	HARTFORD.	NEW HAVEN.	MERIDEN.	WATERBURY.	NEW BRITAIN.	BRIDGEPORT.	NORWICH.	NEW LONDON.	MIDDLETOWN.
Total deaths	102	107	22	40	27	52	34	18	20
Monthly death-rate	24	17	12	20	20	19	16	16	18
Zymotics	36	14	5	10	10	12	9	3	4
Infantile	34	31	7	3	11	20	11	4	4
Nervous diseases	11	24	4	..	..	..	..	..	2
Heart diseases	3	6	1	4	..	1	3	1	1
Scarlet fever	...	5	..	2	3	..	..	..	..
Typhoid fever	1	1	1	1	1	1	..	..	..
Typho-malarial fever	..	..	..	..	..	..	..	..	..
Malarial fever	..	1	..	..	..	1	..	..	1
Diphtheria and croup	27	6	..	4	3	2	3	..	2
Whooping-cough	1	..	..	1	..	..	1	1	..
Diarrhœal diseases	3	..	..	..	1	2	..	..	..
Measles	1	..	..	..	..	10	2	..	..
Cerebro-spinal meningitis	1	..	..	..	2	3	1	1	..
Consumption	12	16	3	5	3	..	2	1	3
Pneu'ia and congs'n lung	4	8	2	7	2	..	3	2	2
Bronchitis	7	1	..	..	..	..	..	..	..
Old age	..	..	..	2	..	..	..	..	..
Railroad accidents	2	..	..	..	..	..	..	..	..
Accident and violence	1	1	..	1	..	3	1	1	1
In public institutions	8	8	..	..	..	..	..	..	4

The report is delayed for several reasons, failure to receive one or two reports by reason of illness of the reporters, and absence on my own part in sanitary work in different parts of the State. If without too much trouble the reports could all be made by the 15th, this abstract could be made more promptly. There are many towns yet that no reports are received from. It is hoped eventually to secure a reporter in every place. When one once forms the habit, it is not much trouble to send a report of what has come under one's own observation. The places that are never named are those from which no reports are made, either regularly or at intervals. The number of our correspondents is steadily increasing, and now includes all regions of the State.

The month does not present as good a record as it should, for a short one. The total mortalities are too high, and the ratios are higher than those for the same months in previous years. The most noticeable event is the return of acute tertian ague. For some time past reports have been made of this recurrence, now here, now there, until it has extended over nearly all the region that has been invaded by malaria, where dumb ague and the like and the continued type of disease had been the rule. The last new start is reported from Middlesex county, from Durham and adjacent towns, thus completing the whole area, except here and there localities that have not yet showed the movement. It has been irregular both as to time and space, and at first suggests a renewed onslaught of malaria as it first appeared, but there is no increase in the periodic type, and, as a rule, after the appearance of quite a number of cases, the frequency diminishes and scattering cases continue to be encountered. As clearly defined cases of tertian ague had rarely been seen over a large area, where the decline of the periodic type and the decrease in malarial cases indicated an entire disappearance of the disease, the reappearance excites attention and the developments will be closely watched, to learn what the prospects are that the malarial type has become a permanent one. As typho-malarial fever still lingers in England, we may expect the same result here, but whether acute ague is to be a regular affliction is another question.

The epidemic of diphtheria continued unabated during February. In Hartford the death rate is even higher than in January, and the number from zymotic diseases and the infantile deaths are slightly increased over those of January. The total mortality since January, 1883, from croup and diphtheria is 295, a condition unprecedented in the sanitary history of the State. There is certainly a need for systematic sanitary work, which none but a well-organized board of health can accomplish. Fortunately, the scarlet fever did not spread, and since February there has been some decrease in the prevalence of diphtheria. As shown by the table, the disease has appeared in several cities. Bloomfield, Thomaston, Plainfield, Westport, South Manchester, Avon and North Manchester report several cases each. The disease is unusually common.

Scarlet fever appears in the table reported from several cities. In Glastonbury seven children in one family were attacked; two were buried in one grave, and the others were seriously sick, and the death of two children in another family is reported. In adjacent towns cases were reported—from North Manchester, New Canaan, Willimantic, Greenwich, New Hartford, Stafford Springs and Haddam—but no general prevalence.

Measels and whooping-cough are quite common. The former has been very prevalent in the northern part of North Manchester, and epidemic in Willimantic. Suffield and Plainfield also report cases. One fatal case is reported from Willimantic, and there are several in the cities.

Influenza and bronchitis have been more common than lung fever. For the last two years the maximum mortality from lung fever has been in the spring months, instead of the first quarter of the

year, as has been the general rule heretofore for a long time.

Malarial fever is extending into Windham county. Hampton and Plainfield report cases. A fatal case of thypo-malarial fever is reported from Granby, and with the exception of the developments before mentioned, are about the usual manifestations for the season.

The prominence of typhoid fever is indicated by the table, but it is more in the cities than in the country. The unusual prevalence of dysentery and diarrhœal troubles at this early season was noted last month. It is still more noticeable in February. A death from a severe type of dysentery occurred after a short illness in the southern part of the State. Quite a number of diarrhœal troubles are reported, one fatal in Granby, one in Plainfield, and an unusually large number of cases, both among children and adults, are reported from quite a number of places. Whether this is an indication of an increasing tendency towards choleraic disorders is an interesting question that will be closely studied. The month has been unfavorable to consumptives and to the aged, and marked by a prevalence of bronchitis and congestive lung diseases.

In the succeeding month small-pox appeared in Norwich from paper rags, and Waterbury near the quarters of the epidemic of two years ago. The disease is well under control by efficient work in both places.

PROPOSED IMPROVEMENT OF THE MEDICAL AND SANITARY SERVICES ON BOARD TRANS-OCEANIC PASSENGER VESSELS; THE BILL BEFORE CONGRESS.

The following bill (H. R. 6178), introduced by Hon. H. W. Slocum. of New York, was prepared by the committee appointed by the American Medical Association at the meeting in Cleveland in June last :[1]

SUPPLEMENT TO AN ACT ENTITLED "AN ACT TO REGULATE THE CARRIAGE OF PASSENGERS BY SEA."

Be it enacted by the Senate and House of Representatives of the United States of America, in Congress Assembled:

SECTION 1. That in every steamship or other vessel carrying or bringing passengers, other than cabin passengers, to the United States, there shall be properly constructed and separated from other parts of the vessel two compartments or spaces to be used exclusively as hospitals—the one for the men and the other for the women; such hospitals to be located on the main deck or the deck immediately below it, and never on any lower deck, and to be in no case less in size than the proportion of eighteen clear superficial square feet for every fifty such passengers and crew; and such hospitals shall be supplied with proper beds, bedding and utensils, and kept so supplied throughout the voyage.

SEC. 2. And every steamship or other vessel carrying or bringing passengers, other than cabin passengers, exceeding with the crew fifty in number, and less than six hundred, shall be required to carry a duly qualified, competent and *regularly licensed* surgeon or medical practitioner, and where the number of such passengers and crew is over six hundred, a junior or assistant surgeon, or medical practitioner, in addition, which surgeon and medical practitioners, junior and senior, shall be rated as such on the ship's articles, and shall be provided with surgical instruments, medical comforts, and medicines proper and necessary for diseases and injuries incident to a sea voyage, and for the proper medical treatment of such passengers and crew during the voyage, and with such articles of food and nourishment as may be proper and necessary for preserving the health of infants and young children; and the services of such surgeons or medical practitioners shall be promptly given without fee in every case of sickness, disease, or accident to any of the passengers or crew, or to any infant or young child of any such passenger who may require their services; and the medical officer, where there is but one, and the senior, where there are two, shall also be required to perform the duties of sanitary officers, to make daily inspections of all inhabitable portions of the vessel, and daily reports thereon in writing to the master of the steamship or passenger vessel, together with such suggestions and recommendations as in his judgment may be necessary to the preservation of health on board. He shall also exercise constant vigilance in regard to the condition of the provisions and water, and promptly report to the master anything which may appear to him to be deleterious to the health of any person on board.

SEC. 3. For the proper exercise of these functions, and the maintenance of the respect to which such medical and sanitary officers are entitled, they shall be provided with a steward or apothecary competent to dispense medicines under their direction, and for their special service, and their tenure of office, remuneration, and right to suitable quarters, subsistence and attendance, shall be upon the same basis as, and coördinate with the purser, first officer and chief engineer of the vessel on which they serve.

SEC. 4. For a violation of either of these provisions, or the disregard of the recommendations *made in writing* by the medical and sanitary officers, as herein provided, the company to which the steamship or other passenger vessel belongs shall be liable to a penalty not exceeding two hundred and fifty dollars in every case.

SEC. 5. That this act shall take effect and be in force from and after its passage.

[1] Dr. A. N Bell offered the following resolution, which was adopted by the Association :

Resolved, That, being impressed with the truthfulness and importance of the Memorial of the Parliamentary Bills Committee of the British Medical Association, under date of March 17, 1883, the American Medical Association urges upon the Congress of the United States the subject of competent medical and sanitary service, and proper provision for its maintenance on board all trans-oceanic vessels, and that a committee of five be appointed to promote this object, and to report again upon the condition of the subject at the next session.

The committee consists of Dr. A. N. Bell, New York; Dr. A. L. Gihon, U. S. Navy; Dr. I. N. Quimby, New Jersey; Dr. H. O. Marcy, Massachusetts; and Dr. Henry H. Smith, Pennsylvania.

DOMESTIC CORRESPONDENCE.

MEDICAL LAW IN VIRGINIA.

EDITOR JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION.

Sir :—That the members of the Association may be able to compare the several State laws for the regulation of the practice of medicine, I append a copy of the act which has recently passed the Legislature of the State of Virginia, for which I am indebted to Dr. Wm. C. Dabney, chairman of the committee of the Medical Society of Virginia, for whose active efforts in accomplishing this step in the right direction the profession is under obligations. The necessity for such a law is manifest, since up to the time of its enactment there was "no law whatever in Virginia with respect to the qualifications of persons offering themselves as practitioners of medicine. It was *not even necessary that the applicant for practice should be able to read or write.*

The usual effort was made to exempt from examination all persons holding diplomas, but very properly the law, as passed, does not recognize the diploma of any medical college as evidence of competency. The number of examiners through an oversight, has been made *thirty-two* instead of *twelve.*

The character of examination contemplated is shown by the following "proposed blank forms for questions" asked each applicant by each examiner, which form, after being filled up, is to be sent to the President of the Board, and to be read at the annual meeting of the Board.

Chemistry, 15 questions, such as, name the antidotes for corrosive sublimate and describe their modes of action.

Anatomy, 15 questions, such as, name the boundaries of Scarpa's triangle, and state what vessels and nerves are found within it, and give their relations to each other.

Physiology, *Ostetrics* and *Materia Medica*, each 15 questions.

Practice of Medicine and Surgery, 6 questions under each of the following headings :

1. Causes of—(example—State the causes of pneumonia, perityphlytic abscess. cerebral hæmorrhage. typhoid fever, etc.)
2. Symptoms and stages of—(example—pleurisy, bulbar paralysis, etc).
3. Pathology of—(example—Nephritis, diphtheria)
4. Diagnosis of—(example—Gout, rheumatism, pericarditis, etc).
5. Treatment of—(example—pneumonia, valvular disease of heart).

Six Surgical Operations—

The following is the text of the Act:

AN ACT TO REGULATE THE PRACTICE OF MEDICINE AND SURGERY.

Be it enacted by the General Assembly of Virginia :

1. There shall be for this State a Board of Medical Examiners, consisting of three members from each Congressional district in the State, and two from the State at large, whose term of office shall be four years, or until their successors are appointed and qualified. The term of office of the Board first appointed shall commence on the first day of January, 1885.

2 The said board shall consist of men learned in Medicine and Surgery, and shall be appointed by the Governor on the 1st day of November, 1884, and every fourth year thereafter, from a list of names to be recommended by the Medical Society of Virginia Vacancies occurring in such Board for unexpired terms, shall be filled in the same manner. Such recommendations shall be by the votes of a majority present at some meeting of the said Society, and the same shall be certified to the Governor by the President and Secretary of such meeting. Provided, however, that in case such Society fail to make such recommendations prior to the time of appointment, or if the Governor shall, in any case, consider the persons so recommended, or any of them, unsuitable, then he shall appoint such Board, either in whole or in part, without regard to such recommendations[1] If any of said examiners shall cease to reside in the district for which he was appointed, it shall vacate his office.

3. The members of said Board of Medical Examiners shall qualify and take usual oath of office before the county or corporation court of the county or corporation in which they shall respectively reside. The officers of said Board shall be a President, Vice-President and Secretary (who shall also act as Treasurer)—such officers to be members of and elected by said Board. The first meeting of the same shall be at Richmond, and such time as the Governor shall notify the members by mail to assemble. Subsequent regular meetings shall be at such times and places as the Board may prescribe, and special meetings may be had upon the call of the President and two members; but there shall not be less than one regular meeting per annum. Five members of said Board shall be a quorum; said Board may organize at its first meeting, and may, at its first or any subsequent meeting, prescribe rules, regulations and by-laws for its own proceedings and government, and for the examination of candidates for the practice of medicine and surgery by its individual members.

4. It shall be the duty of said Board, at any of its meetings, and of the individual members of said Board, at any time, to examine all persons making applications to them who shall desire to commence the practice of medicine or surgery in this State. When the examination is by an individual member of the Board, he shall report the result of the same to the President thereof; and when an applicant shall have passed an examination satisfactory as to proficiency before three individual members of said Board, or before the Board in session, the President thereof shall grant to such applicant certificate to that effect. A fee to be presented by said Board, but not to exceed five dollars, shall be paid to said Board (through such officers or members as it may designate) by each applicant before such examination is had. In case any applicant shall fail to pass a satisfactory examination before the Board or before the three individual members to whom he shall first apply, he shall not be permitted to stand any further examination within the next three months thereafter; provided, however, no applicant shall be rejected upon his examination on account of his adherence to any particular school of medicine or system of practice, nor on account of his views as to the method of treatment and cure of diseases.

5. The fund realized from the fees aforesaid shall be applied by the Board towards its expenses, including a reasonable compensation to the President and Secretary.

6. Any person who shall obtain a certificate as aforesaid from the President of said Board, shall cause his name to be registered in the Clerk's office of the County or Corporation Court for the county or corporation in which he shall reside; and it shall be the duty of said clerk to register the name of every such person presenting such certificate, together with the date thereof and the name of the President of the Board signing the same, in a book kept for the purpose as a part of the records of his court, which shall also give the date of each registration, and his fee for each registration shall be one dollar, to be paid by the person whose name is registered.

7. No person who shall commence the practice of medicine or surgery after the first day of January, 1885, shall practice as a physician or surgeon for compensation without having first obtained a certificate and caused his name to be registered as aforesaid. Any person violating the provisions of this section shall pay a fine of not less than fifty nor more than five hundred

[1] Amended then so as to give the State Medical Society three months in which to make new nominations.

dollars for each offence, and shall be debarred from receiving any compensation for service rendered as such physician or surgeon.

8. Any person who shall have been assessed with a license tax as a physician or surgeon by any Commissioner of the Revenue in this State at any time prior to the first day of January, 1885, shall be taken as having commenced the practice of medicine or surgery prior to that date; but any person who shall not have been so assessed shall be taken as not having commenced such practice prior to that date.

9. Any physician or surgeon who shall commence to practice after the first day of January, 1885, and who shall reside in an adjoining State within ten miles of the boundary line of this State, shall be entitled to stand the examination and receive the certificate hereinbefore provided for, and such certificate shall be registered as hereinbefore provided, in that county in this State which is nearest his place of residence; and such certificate and registration shall make it lawful for him to practice medicine and surgery.

10. Nothing in this act shall be taken as including or affecting in any way the practice of dentistry, nor shall it include physicians or surgeons residing in other States and called in consultation in a special case with a physician or surgeon residing in this State; nor shall it be construed as affecting or changing in any way the laws in reference to the license tax to be paid by physicians, surgeons and dentists.

Very respectfully, your obedient servant,

ALBERT L. GIHON,
Medical Director, U. S. N.

U. S. Naval Hospital, Washington, D. C., April 8, 1884.

FROM WASHINGTON.

On March 19, Dr. C. K. Mills, of Philadelphia, delivered the Toner lecture at the Smithsonian Institution, taking for his theme: "Premature Diseases among Men in Public and Private Life, brought on from Over Mental Strain." He said he was indebted for the suggestion of the subject of the lecture to Dr. Toner, who, from his long residence in Washington, had had an unusual opportunity of noticing the premature breaking down of men in public life, one prominent example being presented in the case of Vice-President Wilson, whose death was caused by over work and mental strain. He dwelt upon the effects of mental strain in producing pneumonia, Brights, and other diseases, and gave the marked symptoms which preceded the development of positive disease. Statistics showed the average age, taking all classes of men in the United States, to be about fifty years. In comparing a few of the most eminent English and American statesmen, the average age of the English was found to be seventy-two years, and that of the American seventy. The break-downs were apt to occur before the age of fifty. His opinion was that this premature decay began in the schools from over-stimulation to the brain where there was a difference of mental inheritance, which rendered natural to one what was laborious and next to impossible for an other.

A bill was introduced into the House of Representatives (No. 6108) on March 24, by Mr. McCord, to pay the College of Physicians and Surgeons, at Keokuk, Iowa, $25,000 for the loss by fire of their college and hospital buildings on April 17, 1863, while in use by the United States troops as a post hospital.

Bill 6165 was introduced in the House of Representatives by Mr. Laird on March 24, to make the pay of hospital stewards of the first class in the U. S. Army, the same as now paid to ordnance and commissary sergeants, $34 per month, and the additional pay for re-enlistment, as is now allowed by law.

Bill 1920 was introduced in the Senate by Mr. Mitchell, to appoint Dr. A. P. Frick an Assistant Surgeon, U. S. A., to date from Nov. 1, 1882, and to relieve him from the operation of general orders relative to requirements of all candidates for appointment in the Medical Corps.

Representative Barksdale has reported favorably, April 4, from the Committee on Commerce, House bill 4835, for the purchase of the property known as the Seamen's Retreat, in the town of Middletown, N. Y., consisting of 30 acres, at a cost not exceeding $280,000, and the use of the same for the purposes of a Marine Hospital at the port of New York. The committee say this enactment will do no more than put the port of New York on an equal footing with respect to Marine Hospital service with ports of less commercial importance. They say that New York is the only seaport city in the United States with a large population which has not been provided by the general government with a Marine Hospital.

Representative Rosecrans introduced a bill (H. R. 6265) March 31, declaring that acting assistant surgeons, having been regularly examined and found qualified, shall be eligible to appointment as assistant surgeons of the army, and authorizing the President to nominate such to fill vacancies. It was referred to the Committee on Military Affairs.

March 31, Representative Steele introduced a bill (H. R. 6277) to credit all officers of the Medical Department of the Army with whatever time they may have actually served, whether continuously or at different periods, as commissioned officers, or enlisted men, since April 19, 1861, either in the regular or volunteer forces of the United States. This was also referred to the Committee on Military affairs.

GARFIELD HOSPITAL.—The directors of this hospital have appointed as the staff of the hospital, the following: Consulting Surgeons, Drs. Fred May and N. S. Lincoln; Consulting Physicians, Drs. W. W. Johnston, J. Taber Johnson, and Dr. A. G. P. Garnett; Visiting Surgeon, Dr. J. Ford Thompson; Visiting Physicians, Drs. C. E. Hayner, and J. W. H. Lovejoy; Ophthalmologist and Otologist, Dr. Swan M. Burnett; Resident Physician, Dr. Cutts.

MEDICAL ASSOCIATION OF THE DISTRICT OF COLUMBIA.—The annual meeting of this association was held April 4. The officers are as follows: President, Dr. Joseph Borrows; Vice-Presidents, Drs. King and Johnston; secretary, J. F. Hartigan, and S. S. Adams, Treasurer. Drs. J. W. Buckley, J. W. H. Lovejoy, D. C. Patterson, J. T. Johnston, C. W. Franzoni, W. H. Taylor, C. E. Hazner, T. E. McArdle, and E. C. Morgan were appointed a standing committee The board of censors appointed consisted of Drs. J. O. Stanton, T. C. Smith, and T. E. McArdle. Delegates to the convention of the Amer-

ican Medical Association, are D. R. Hagner, A. Peter, T. C. Smith, W. W. Johnston, W. H. Taylor, L. Mackall, T. E. McArdle, W. G. Palmer, E. M. Schaeffer, G. B. Harrison, H. D. Fry, W. C. Briscoe, L. L. Freidrich, J. R. Bromwell, R. T. Holden, J. H. Yarnall, L. Tyler, J. Borrows, and H. E. Leech.

COSTAL EXSECTIONS AND EMPYEMA.

NEW ORLEANS, MARCH 24, 1884.

N. S. DAVIS, M.D., LL.D., Chicago, Ill.

Dear Sir:—Estlander's thoracoplasty, while conferring a great boon upon patients "across the water" suffering with chronic empyema or even hydrothorax, or pleuro-cutaneous fistula, is not a new surgical procedure in America. Our late Dr. Warren Stone advocated and utilized resection of the ribs for such cases more than 30 years since successfully. I have seen him perform it personally a little less than 20 years since.

The phenomena present in Estlander's cases are identical with those of more antiquated reports of cases, yet his detailed reasoning embodies more technical ground than is generally accredited to the conditions pro and con. Apart from the fistulous outlet, the late Dr. Stone usually selected the sixth and seventh intercostal space, as well as I can recall.

If this will be of any importance to your collected data, let all honor be paid to our native American surgeon within our own confines.

I am, respectfully,
GEO. N. MONETTE, M.D.

MEDICAL LEGISLATION.

EDITOR OF THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION.

In the issue of your Journal of April 5, under head of "Legal Regulation of the Practice of Medicine," a physician of Indiana offers an article from which we cull two points, viz.:

First. That the doctor thinks the medical men, members of the Legislature, could not agree as to the minutiæ of a bill to regulate the practice, and therefore efforts in that direction failed, and that any bill presented should be endorsed by the lay members.

Second. He advises the American Medical Association to formulate a bill or to advise as to provisions for such.

As to the first proposition, we think the doctor is correct, and this is the principal reason why, as chairman of Committee on State Medicine for Indiana, we advised, and the Committee reported to the State Medical Society, session of 1883, that no bill as emanating from the State Society, should be presented to or urged upon the Legislature, by any Committee of such society, but that the physicians should, if possible, guide the work of laymen in that direction.

The doctor's first proposition practically annuls his second, for the American Medical Association could only hope, by any action it may take, to reach the same class as can be reached by State Medical Associations. The formulation of an ideal bill by the American Medical Association to regulate the practice, will fail of its object, if that be to *assist in having the several State Legislatures* adopt the formulated bill and pass it to a law. The American Medical Association cannot reach the Legislatures as quick or as effectually as can the State Associations.

The truth is, we had better let the States alone and permit each to work its way. It might be well for the American Medical Association to *endorse* the *essential* feature of such a law, viz.: the separation of the examining from the teaching powers, but nothing more.

There are always fanciful and impracticable ideas put forward, but we must remember that as to the details of a bill for the purpose mentioned, what will be proper or acceptable in one State will not be so for another.

As for Indiana, the medical men who desire any law to regulate the practice, have about concluded to accept any one that has embraced in it the *essential* feature above mentioned. The people will also accept such; the field is well worked, and any re-arrangement to conform to some ideal law of intricate details, will work great hurt and perhaps destroy all.

THAD. M. STEVENS, M.D.,
Chairman Committee on State Medicine.

Indianapolis, Ind., April 7, 1884.

SPECIAL NOTICES.

THE AMERICAN MEDICAL ASSOCIATION.

SECTION OF PRACTICE OF MEDICINE.

Dr. John V. Shoemaker, of Philadelphia, Pa., Chairman, Dr. W. C. Wile, of Sandy Hook, Conn., Secretary.

The Chairman submits the official programme for the meetings of the Section of the Practice of Medicine, to be held in Washington, D. C., Tuesday, Wednesday, and Thursday afternoons, May 6, 7, and 8, 1884.

The following special subjects have been promised, and those who are announced to enter into the discussions have accepted and will be present.

1. Discussion on "A Contribution to the Clinical Study of Epilepsy," will be opened by Professor William Pepper, of Pennsylvania. Dr. Roberts Bartholow, Pa.; Dr. Horatio Wood, Pa.; Dr. J. S. Jewell, Ill.; D.r James T. Whittaker, Ohio; Dr. O. P. Hooper, Ark.: Dr. Eugene Grisom, N. C.; Dr. James E. Reeves, W. Va.; Dr. T. B. Lester, Kansas; Dr. Joseph P. Logan, Ga.; Dr. W. K. Bowling, Tenn,; Dr. John S. Moore, Mo.; Dr. James F. Hibbard, Ind.; Dr J. J. Caldwell, Md.; Dr. John A. Murphy, Ohio, and Dr. A. P. Grinnell, Vt., are expected to take part.

2. A discussion on the "Clinical Study of the

Heart Sounds," will be opened by Professor Austin Flint, Sr., of New York. Dr. Edward Janeway, N. Y.; Dr. William Pepper, Pa.; Dr. Frederick C. Shattuck, Mass.; Dr. John H. Bemiss, La.; Dr. Jas. Wilson, Pa.; Dr. Richard McSherry, Md.; Dr. Jas. R. Leaming, N. Y,; Dr. John S. Lynch, Md., and Dr. A. B. Palmer, Mich., are expected to take part.

3. A discussion on "Tuberculosis" will be opened by Dr. Henry F. Formad, of Pennsylvania. Dr. Austin Flint, Sr., N. Y.; Dr. William Welch, N. Y.; Dr. N. S. Davis, Ill.; Dr. George M. Sternberg, U. S. A.; Dr. R. S. Fitz, Mass; Dr. Henry O. Marcy, Mass.; Dr. James Tyson, Pa.; Dr. Edward Janeway, N. Y.; Dr. Charles Dennison, Col.; Dr. Henry F. Campbell, Ga.; Dr. W. T. Belfield, Ill.; Dr. Alonzo Garcelon, Me.; Dr. E. O. Shakespeare, Pa.; Dr. G. C. Smythe, Ind.; Dr. Harold C. Ernst, Mass.; Dr. W. Geddings, S. C.; Dr. Trail Green, Pa., and Dr. John Lynch, Md, will take part.

The following are also promised:—

Ayres, S. G., M.D., New Theory and Instrument of Diagnosis.

Bartholow, Roberts, M.D., subject to be announced later.

Crawford, S. K., M. D., Ætiology of Enteric Fever.

Duhring, Louis A., M.D., Dermatitis Herpetiformis.

Flint, Austin, Jr., M.D., Dietetic Treatment of Diabetis Mellitus.

Green, Trail, M.D, The New Officinal Chlorate.

Griswold, Gaspar, M.D., Irregular Apoplectic Attacks from Other Causes than Hæmorrhage and Embolism.

Janeway, Edward, M.D., Simulation of Pathognomonic Signs and Symptoms.

Jackson, S. K., M.D., Typhoid Fever.

Keyt, A. T., M.D., Retardation of the pulse in Mitral Insufficiency.

Linn, G. A., M.D., Specific Treatment of Diphtheria and Croup.

Marcy, Alexander, Jr., M.D., Muscular Hypertrophy of the Stomach.

Marcy, Henry O., M.D., The Germ-Theory of Disease.

Miller, J. P., M.D., Phthisis, its Successful Treatment.

Prentiss, D. W., M.D., 1. Importance of Uniformity in the Pharmacopœia. 2. A Plea for Greater Interest in the Pharmacopœia on the part of Physicians.

Reed, R. Harvey, M.D., Irritation of the Capsule of Glisson.

Schenck, W. L., M.D., Occult Causes of Disease.

Tyson, James, M.D., The Milk Treatment of Disease.

Welch, Wm. H., M.D, Pathology of Myocarditis.

Whittaker, James T., M.D., The Ætiology of Pericarditis.

Wilson, James, M.D., The Diagnosis of Tumors of the Anterior Mediastinum.

Accepted and approved by the Chairman of the Committee of Arrangements.

A. Y. P. GARNETT, M.D.

WASHINGTON, D. C., April 2, 1884.

RAILROAD NOTICE.

AMERICAN MEDICAL ASSOCIATION.

WILLIAM B. ATKINSON, M.D.,

Permanent Secretary, 1400 Pine Street, Southwest Corner Broad, Philadelphia.

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Evans. & Terre Haute.	Det., Lansing & Nor.
Fitchburg.	Grand Rapids & Ind.
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These roads agree to return delegates at one-fourth of the lowest unlimited rates from Washington to points within the territory embraced by the Trunk Lines.

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Delegates living on railroads that run into Norfolk, can reach Washington by steamer, which leaves Boston daily, except Sunday, at 4 P. M.

Round trip tickets between Norfolk and Washington $1.50. State rooms $1. Meals $1.

SOCIETY NOTICES.

Office of Secretary State Medical Society,
No. 81 Twelfth Street,
Wheeling, W. Va., April 28, 1884.

Dear Doctor:—The Medical Society of the State of West Virginia will hold its seventeenth annual session at Clarksburg, commencing at 2 o'clock P. M., Wednesday, May 21, 1884.

The last meeting of the Society was rendered more than usually interesting by the intelligent discussion of the papers read. That the meetings may be made as profitable as possible to all who attend them, the subjects of the papers to be presented should be announced to the members before the meeting. To enable us to prepare and send out a programme, all those who contemplate presenting papers at the coming meeting are requested to send *the subject* at their earliest convenience.

We expect to secure reduced rates on railroads, and the Secretary will take pleasure in sending the necessary order to every member.

N. B.—The order for commutation must be procured before leaving home to attend the meeting.

Your ob't servant,
S. L. Jepson, Secretary.

MISCELLANEOUS.

We find some of the French journals are still venting their wrath upon our periodical medical literature, but as we cannot get the same amount of amusement out of their succeeding efforts as in the one published on page 277, and as our valued contemporary seems to think that publication *not* a kindly act, we forbear. But we really could not resist publishing that translation. The *Medical Record* has no cause to fear the publication of any such criticism in its own country; and it is so sweeping in its supposed application to the whole eternal Yankee Nation, with the saving clause at the end which singles out certain rapacious Anglo-Germans, that we could not allow it to remain in such obscurity.

Paralysis of the Little Finger of the Left Hand Following an Injection of Ether.—MM. Arnozan and Salvat report in the *Journal de Medicine de Bordeaux*, the case of a servant girl thirty-two years of age, who, while under treatment for broncho-pneumonia, received an injection of ether, by means of a Pravaz syringe, the needle of which was inserted under the skin of the internal surface of the left fore-arm, about its middle. At the time of the injection, pain was produced at the point of insertion; an hour or two later a swelling ensued of the size of a hen's egg, it was red, inflamed, and painful to the touch. When the patient wished to raise her hand, she felt a sense of weight from that point down to and including the hand. At the end of eight days, all these symptoms of pain and swelling had disappeared; but the day after the injection she noticed that the little finger was completely flexed upon the hand, and she could not move it in any direction. Fifteen days later movement returned, but much less marked than normal. She did not call attention to this until five weeks had passed from the time of the injection, when it was found that she could not raise her little finger to the level of the ring finger. It was possible to extend the two last phalanges, but not to influence by extension the first phalanx upon the metacarpal bones. There was no diminution in size of the fore-arm, or other deformation. If pricked with a pin, she felt the movement, but experienced no pain, except when it was passed deep. The anæsthetic surface so mapped out occupied the region of the ulnar nerve, the limits of anæthesia not being positive, as between the sensible and insensible points there was an intermediary zone. At the seat of the puncture were some small pimples, effaced easily by pressure, but they disappeared in from fifteen to eighteen hours, and there was no hæmorrhagic infiltration; these pimples were confined to the anæsthetic region. The application of electricity to the ulnar nerve produced a response of extension of the first phalanx, and under its systematic use for almost two weeks, perfect relief was afforded. There were no formications or pains in the anæsthetic region, the little finger simply felt heavy.

Hymeneal.—Atkinson—Smith. At their home, April 4, 1884, by Rev. W. W. Barr, D.D., S. Jennie Smith and William B. Atkinson, M.D., all of Philadelphia. No cards.

NEW BOOKS.

Garrettson, J. E. Oral Surgery; a treatise on the diseases and surgery of the mouth, face, teeth, and associate parts. 4th ed. rev. Philadelphia: J. B. Lippincott & Co. 8vo. Cl., $8.

Hoppin, S. B. The Medical Directory of Philadelphia for 1884. Philadelphia: P. Blakiston, Son & Co. 12mo. 205 pp. Cl., $1 50.

Huxley, T. H. Animal Atomatism and other Essays. New York: J. Fitzgerald. (Humboldt Lib, No. 53) 8vo. 49 pp. Paper, 15c.

Mitchell, S. Weir. Fat and Blood. An essay on the treatment of certain forms of neurasthenia and hysteria. 3d ed. rev, with additions. Philadelphia: J. B. Lippincott & Co. 12mo. Cl, $1.50.

Roberts, D. Lloyd. The Student's Guide to the Practice of Midwifery. 3d ed. 12mo. 394 pp. London: Churchill. 7s 6d.

Boularan, F. De la compression des nerfs du membre supérieur à la suite des fractures. 8vo. 66 pp. Paris: Davy.

Brissé Saint-Macary, P. A. M. De la maladie kystique des mammelles. 8vo. 106 pp. Paris: Davy.

Broca, A., et A. Wins. Recherches sur la suralimentation envisagée, surtout dans le traitement de la phtisie pulmonaire. 8vo. 99 pp. Paris: Dom.

Cochez, A. De la recherche du bacille de la tuberculose dans les produits de l'expectoration. 8vo. 80 pp. Paris: Davy.

Connen, L. Du traitement prophylactique de l'ophtalmie des nouveau-nés par l'acide borique. 8vo. 35 pp. Paris: Davy.

Cartier, A. A. Anatomie Philosophique, Les cinq vertèbres céphaliques; la troisième paire de membres, chez l'homme et les autres vertébrés. 8vo. xi. 363 pp. Avec figures. Paris: J. B. Baillière et fils.

Du salicylate de soude, étude, critique et observations. IIe edition. 8vo. 16 pp. Paris: Delahaye et Lecrosnier.

Fasquelle, J. Contribution à l'étude du vertige oculaire. 8vo. 32 pp. Paris: Davy.

Guedeney, L. Contribution à l'étude de la blennorrhagie chez la femme. 8vo. 44 pp. Paris: Davy.

Guermonprez, F. Note sur un cas de cysticesque du sein. 8vo. 15 pp. Lyon: Plan.

Hannequin, J. H. De la chorée rhumatismale considérée comme une variété de rhumatisme cérébrale, et de la mort dans la chorée. 8vo. 53 pp. Paris: Davy.

Jeannel, S. Du charbon chez l'homme traité par les cautérisations ponctures superficielles. 8vo. 155 pp. et planche Montpellier: Bœhm et fils.

Monique, M. Des principales applications de l'acide acétique; l'acide pyroligneux rectifié dans le traitement de la teigne tondante et de quelques autres affections cutanées. 8vo. 76 pp. Paris: Davy.

Mossé, A. Prophylaxie de la variole; les révaccinations. 8vo. 22 pp. Paris: Delahaye et Lecrosnier.

Quermonne, L. Etude sur la pathogénie des neuralgies. 8vo. 103 pp. Paris: Davy.

Roux, G. Note sur un cas de guérison d'étranglement interne par des applications alternatives de chaud et de froid. 8vo. 8 pp. Lyon: Plan.

Vogt, C. Les mammifères. Edition française originales. 4to. xxvii. 552 pp. 40 planches; 265 figs. Paris: G. Masson. 32f.

Belehrungen, hygienisch-diätetische Verhaltungsmassregeln bei Kinderkrankheiten f. mütter u. Krankenpfleger. Eingeführt in der kinder-poliklinik zu Leipzig. 7 Nm. 8vo. 17 pp. Leipzig: Denicke.

Johannessen, Axel. Die epidemische Verbreitung d. Scharlachfiebers in Norwegen. 8vo. vii. 214 pp. Kristiania: Dybwad.

List of Changes in the Stations of Medical Officers, U. S. Navy, for the Week ending April 12, 1884.

P. A. Surgeon S W. Battle, ordered before Retiring Board.

Surgeon H. M. Wells, detached from Naval Hospital, New York, to report at Bureau for special duty.

P. A. Surgeon C. T. Hibbett, placed on waiting orders.

Surgeon H. Stewart, placed on retired list from April 10.

Official List of Changes in the Stations and Duties of Officers Serving in the Medical Department United States Army, from April 5, 1884, to April 11, 1884.

Sutherland, Charles, Colonel and Surgeon, to be relieved from duty in Division of the Pacific, and to report to the Commanding General Division of the Atlantic for duty as Medical Director of that division and of the Department of the East. (Par. 4, S O. 7, 8, A. G. O., April 4, 1884.)

Bailey, Elishael, Colonel and Surgeon, ordered to report to the Commanding General Division of the Pacific for duty as Medical Director of that Division and of the Department of California. (Par. 4, S. O. 78, A. G. O., April 4, 1884.)

Smith, Joseph R., Major and Surgeon, directed to represent the Medical Department of the Army at the Annual Meeting of the American Medical Association, to be held at Washington, D. C, on the 6th of May, 1884, and on the adjournment of the Association to return to his proper station, San Antonio, Texas. (Par. 7, S. O. 81, A. G. O., April 8, 1884.)

Sternberg, George M., Major and Surgeon, ordered to be relieved from duty in the Department of California, and to report to Commanding General of the Department of the East for assignment to duty.

Moseley, Edward B., Captain and Surgeon, ordered to be relieved from duty in the Department of the East and to report to the Commanding General of the Department of the Columbia for assignment to duty. (Par. 4, S. O. 78, A. G. O., April 4, 1884.)

Wilcox, Timothy, Captain and Assistant-Surgeon, ordered to be relieved from duty in the Department of the Columbia, and to report to the Commanding General of the Department of the East for assignment to duty. (Par. 4, S. O. 78, A. G. O., April 4, 1884.)

Official List of Changes of Stations and Duties of Medical Officers of the United States Marine Hospital Service—January 1, 1884, to March 31, 1884.

Fessenden, C. S. D., Surgeon; to proceed to Cairo, Illinois, and Memphis, Tennessee, as Inspector. March 5, 1884.

Purviance, George, Surgeon; granted leave of absence for 30 days, February 16, 1884.

Smith, Henry, Surgeon; to rejoin his station at Norfolk, Virginia, March 7, 1884.

Irwin, Fairfax, Passed Assistant-Surgeon; relieved from duty at Norfolk, Virginia, to assume charge of Cape Charles quarantine station, March 7, 1884.

Carmichael, D. A., Assistant-Surgeon; to report to Surgeon Purviance for examination for promotion, March 5, 1884.

Armstrong, S. T., Assistant-Surgeon; to report to Surgeon Fessenden for examination for promotion, March 5, 1884.

Bennett, P. A., Assistant-Surgeon; leave of absence extended ten days, Jan. 18, 1884.

Ames, R. P. M, Assistant-Surgeon; detailed for temporary duty on relief boat; Ohio River flood sufferers, Feb. 16 and March 1, 1884.

Devan, S. C., Assistant-Surgeon; upon expiration of leave of absence to proceed to St. Louis, Missouri, for temporary duty Feb. 6, 1884.

Kalloch, P. C., Assistant-Surgeon; to proceed to Charleston, South Carolina, for temporary duty, Feb. 1, 1884.

Bevan, A. D, Assistant-Surgeon; granted leave of absence for seven days, March 13, 1884.

Wasdin, Eugene, Assistant-Surgeon; granted leave of absence for fifteen days, March 4, 1884.

Battle, K. P, Assistant-Surgeon; to proceed to New York, N. Y., for temporary duty, Feb. 4, 1884.

RESIGNATION.

Cooke, H. P., Passed Assistant-Surgeon; resignation accepted by the Secretary of the Treasury, to take effect Feb. 5, 1884, Jan. 31, 1884.

APPOINTMENT.

Battle, Kemp P., M.D., of North Carolina, having passed the examination required by the Regulations, was appointed an Assistant-Surgeon by the Secretary of the Treasury, February 2, 1884.

PROMOTIONS.

Carmichael, D. A., Passed Assistant-Surgeon; promoted and appointed Passed Assistant-Surgeon by the Secretary of the Treasury, from March 1, 1884, March 18, 1884.

Armstrong, S T., Passed Assistant-Surgeon; promoted and appointed Passed Assistant-Surgeon, by the Secretary of the Treasury, from April 1, 1884, March 28, 1884.

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ORIGINAL ARTICLES.

THE BACILLUS TUBERCULOSIS AND THE ÆTIOLOGY OF TUBERCULOSIS.—IS CONSUMPTION CONTAGIOUS?

SECOND COMMUNICATION.

[Read before the Philadelphia County Medical Society, Nov. 14, 1883.]

BY H. F. FORMAD, B.M., M.D.

Lecturer on Experimental Pathology and Demonstrator of Morbid Anatomy in the University of Pennsylvania; Mütter Lecturer in the College of Physicians of Philadelphia.

(Continued from page 153, vol. ii.)

V.—THE BACILLUS TUBERCULOSIS—ITS NATURAL HISTORY, MORPHOLOGY, DETECTION, HABITAT, SIGNIFICANCE, AND DIAGNOSTIC VALUE.

I will now speak about the bacillus proper, and will allude here briefly to its natural history, morphology, habitat, significance, detection and diagnostic value.

The bacillus discovered by Koch, of Berlin, as is well known, is a vegetable organism, and belongs, according to Cohn's classification, to the group of filamentous bacteria (Desmo-bacteria), variety Bacillus.[1]

The tubercle-bacilli form, according to Koch, a species of bacillus by themselves, and on Koch's authority as a *mycologist* we can accept this statement as correct until proved otherwise.

The tubercle-bacilli present themselves as thin, slender rods, in length varying from one-third to the whole of the diameter of a human red blood-corpuscle; in breadth they do not exceed one-fifth to one-tenth of their length. They vary in size in different locations, and, according to observations made by myself conjointly with George Bodamer, my assistant, they vary also greatly in size in different artificial culture-media. In nearly dry soils they appear, as a rule, much smaller than in moist soils. They are blunt at the ends, and frequently contain unstained spores in varying number, which give them a beaded appearance that might be (and has been) mistaken for short torula chains of micrococci. The rods are sometimes slightly curved, and they frequently appear in pairs, forming a V-shaped figure; occasionally the rods are seen crossing one another. Often they appear within animal cells in tissues and other matters which they invade, quite isolated and scanty, so that there may be seen only a few bacilli, or only one bacillus, in a whole microscopic field. Sometimes they occur in large, dense masses, particularly so and most commonly within and around cheesy fragments met with in the contents of lung cavities, as Koch himself first pointed out.

It may be of interest to note that tubercle-bacilli may considerably multiply in sputum when it stands in a bottle for some time, as first observed by Bodamer in my laboratory. Williams, of the Brompton Hospital for Consumptives, records also that he has seen the bacilli multiply in sputum after standing in a room for ten days.

For demonstrative purposes it is well to inspissate tuberculous sputum, or to dry it (as I have seen in Koch's laboratory); for examination it is then moistened with water, and it will then show more bacilli than when fresh.

The methods of detecting the bacillus are so well known that I will not consider in this communication the merits of the different dyes employed. Moreover, success does not depend upon the method or the dye, but mainly upon the skill and the accuracy of the dyer,[1]

As is generally known, the principle in staining bacilli rests upon the fact that bacteria absorb and retain aniline dyes more readily than do the surrounding animal organic materials which they inhabit. When sputum dried upon a glass cover, or a section containing them, is well stained, for instance by aniline violet, and then washed in very dilute nitric acid, only the bacilli will retain the dye, while all the rest of the organic material composing the specimen will be decolorized, and may readily be stained by some other dye without modifying the violet color of the bacilli.[2]

A magnifying power of four hundred diameters is

[1] The statements made by Beneke, Klebs, and Schmidt, that the bacilli are crystalline bodies, have been withd awn; while views to the effect that "bacilli" are to be identified with blood-fibrin, etc., were at no time taken into serious consideration by microscopists.

[1] To detect bacilli is a very simple matter, although by far not so easy as to prepare a specimen of urine and to find the all-important tube-casts; and yet how many physicians (even those perfectly familiar with microscopic technology) will be sure when they discover tube-casts, if they attempt to examine the urine at all?

[2] The staining fluids for bacilli we more commonly use are those after Ehrlich's formula, slightly modified:

nearly always sufficient to detect stained tubercle-bacilli. In fact, we found that where we failed to find bacilli with a good one-fifth objective, neither our one-twelfth Zeiss oil immersion lens nor the Abbé's condenser would reveal any when used (as we always do) for control. If the bacilli are very numerous (as sometimes in lymphatic glands), a mass of them may be recognized easily by the naked eye in a well-stained section as a small stained speck.

Occasionally bacilli may also be seen when unstained. Baumgarten[1] discovered the same tubercle-bacillus simultaneously with, and independently of, Koch, in unstained caustic potash preparations of tubercle-tissues. Koch[2] also states that tubercle-bacilli may be readily seen, especially in artificial tubercles when simply teased in water, or preferably in blood-serum. We have also observed tubercle-bacilli, without resorting to staining, in cultures such as chicken bouillon, identifying them subsequently by means of the usual staining process. In stained preparations too much washed in acid, or in specimens ill preserved, a part or all of the tubercle-bacilli may also be seen decolorized, though still quite distinctly visible.

Tubercle-bacilli are, as a rule, motionless as seen in stained preparations made from the substances they inhabit; but the observations of Bodamer and myself appear to show that the bacilli of Koch may also have an actual (not communicated) motion when for some time cultivated in liquid media. But at the same time, it was observed that the development of the cultures was not as extensive in liquid media (bouillon) as in a solid medium (coagulated blood-serum). Conversing with Koch on this point last summer, he remarked that this was quite possible, and suggested that perhaps the bacilli in their movable state acquire flagelli or cilia at the ends, although he had not yet made such observation. Koch, quite properly, does not seem to consider that motion is an invariably differentiating feature for bacteria.

In cultures (coagulated blood-serum being the preferable nidus) the tubercle-bacilli grow as a dry, scaly, tortuous, whitish-gray mass, spreading themselves exclusively on the surface. The growth is very slow, and is favored by a temperature of 30° to 40° C. (86° to 104° F.)

Dr. Koch kindly demonstrated to me a number of specimens of bacilli, and in particular the appearance of these bacteria exhibiting under low amplification the peculiar S-like figure in the growths in masses. Koch seems now to lay more stress upon this low-power appearance, and upon the pathogenetic properties of the bacillus tuberculosis, as a distinguishing feature from other bacilli, than upon the color test. During the conversation he admitted that some other bacilli may also yield the same micro-chemical reaction as the tubercle-bacilli, but insisted that the latter bacilli cannot be stained brown. The failure of the tubercle-bacilli to take the brown stain, he said, was the reason that they cannot be well photographed (blue- and red-stained objects not being suitable for photographing). He obligingly explained to me the details of his methods and the determination of the value of cultures. I learned from him that those cultures in which the bacilli have no spores are not capable of propagation, nor are they fit for inoculation of animals.

Klebs, to whom Koch had given some of his cultures of tubercle-bacilli, declared that they also contained micrococci. Kock presumes that Klebs has misinterpreted the granules of the coagulated blood-serum (in which they grew) as micrococci. I can testify that bacilli alone were present in those cultures of Koch which I had the opportunity of examining. This is also true of a bacillus-culture in a flat salt-dish obtained from Koch's laboratory by Dr. Shakespeare, of this city; this culture was still perfectly pure (and free of micrococci) when examined by Dr. Shakespeare and myself, three months after the arrival in America.

Concerning my own bacillus cultures which I recommended last autumn (and which are now more often successful than before I went to Berlin, through the use of the complete outfit of Koch's apparatus, supplied by the University of Pennsylvania) I will report later. But it may be said that, even under the most favorable conditions, to obtain success with the tubercle-bacillus culture is at times a difficult task.

Before leaving this part of the subject, I must say that I owe many thanks to the director of the German Imperial Board of health, Dr. Struck, and to Dr. Koch and his assistants, for the very liberal and kind treatment which they extended to me in their laboratory; also for allowing me to study the whole working of their famous institute, and demonstrating to me their methods of work, including the construction of their ingenious apparatus, and permitting me to exercise all the important manipulations in bacteridian studies after Koch's method; and, furthermore, for allowing me to prove that I had succeeded also in staining and recognizing the tubercle-bacillus before I went to them.

I cannot blame Koch for not demonstrating to me how to produce genuine induced tuberculosis with his bacillus within eight days, a favor which he extended only to Watson Cheyne;[1] not because I have not yet the "faith" in the infallible action of the tubercle-parasite, but because Koch was then working at the subject himself, and does not consider the task as much finished as his over-zealous followers do. I was, moreover, informed, while in his laboratory before leaving Berlin, that no one besides himself and

First Stain.—Watery saturated solution of aniline oil, five parts; alcoholic saturated solution of aniline violet, one part; mix and filter.

Second Stain.—Watery solution either of vesuvin or of Bismarck brown; filtered.

Direction for Preparation and Order of Staining.—Sputum in thin layer smeared upon glass cover and *well* dried; immerse (*a*) into first stain for twenty-four hours (rapid staining being not reliable in doubtful cases); (*b*) into dilute nitric acid (one to five parts of water) for two or three seconds; (*c*) wash in alcohol; (*d*) into second stain for two to five minutes; (*e*) wash in water and then in alcohol; (*f*) dry it and mount in Canada balsam or glycerin. Failures to detect bacilli will occur; first, when specimen consists of salivary mucus instead of expectorated material; second, when sputum too thick or too thin is smeared upon cover; third, when not enough heated in drying, or when burned; fourth, when too long in acid; fifth, when too much washed; sixth, when bacilli are absent; seventh, when not recognizing them.

For preparations to be kept, and for tissues, the fuchsine dye, as first stain is preferable, and certain modifications of method necessary.

[1] *Med Centralblatt*, 1882, No. 15.

[2] *Berliner Klin. Wochenschr.*, 1882, No. 15.

[1] See *Practitioner*, April, 1883, page 249.

his assistants ever worked in the laboratory on the tubercle-bacillus beyond staining tissues, sputa, etc., containing it. Besides, the cultivation of the tubercle-bacillus takes a longer time than usually is allowed to outsiders who come to be instructed in Koch's laboratory.[1]

The Habitat of the Tubercle-Bacillus.—After reading most of the numerous compilations in reference to the present standing of the tuberculosis question, it would seem that Koch has established that his tubercle-bacillus is always associated with tuberculosis, and with the diseased products and the various excreta in this disease—and in this disease alone. Since Koch's publication appeared, a number of observers, authoritatively and otherwise, assert the invariable presence of the bacillus in *all* tubercular products; and, further, it is claimed as a proved matter that the bacillus is found in the beginning of the disease—viz., in the youngest tubercle-tissues.

This is, however, not in accordanee with the facts. Neither in Koch's own publication, nor in the records of any microscopist (when the original papers are examined), is the invariable presence of the bacillus in tuberculous lesions or excretions, and its absence in non-tuberculous matters, either clearly shown or proved. Moreover, the authors of nearly all the literary productions are in favor of the contagiousness of tuberculosis, and they disregard, as a rule, the negative evidence.

The question of the occurrence, and partly that of the significanceof the bacillus called by Koch the *tubercle-bacillus* in tuberculous lesions, divides itself into several parts, and hinges upon the results of the following investigations:

1. The examination of tissues affected by tubercular disease for the bacillus; and, if present, the time of its occurrence.

2. The examination, *intra vitam*, of blood of tubercular patients.

3. The examination of the products discharged or eliminated with the excretions by individuals suffering from tubercular disease.

4. The examination of air,—viz., of the breath of phthisical patients, and of the air of sick-rooms and hospitals generally.

5. Comparative studies in animal tuberculosis.

6. The occurrence of bacilli in lesions and substances other than tubercular.

I will state now, briefly, what so far have been the results of the investigations upon these points.

1. Tubercle-bacilli have been detected quite often in the various forms of tubercles of lung, and in scrofulous and tuberculous lymphatic glands; and likewise, although not so frequently, in tubercles of the various serous cavities; and in tubercular ulcerations of the mucous membranes and the skin. But it must be noted that only a few microscopists have recorded examinations of tubercle-tissues for bacilli, and among these there was *not one* who did not meet with a case or a certain number of cases in which tubercle-bacilli were either totally absent in the tissues, or only present in some of the tubercles. The great bulk of bacillus work done comprises merely examinations of sputum.

The facts concerning bacilli in tissues are as follows:

Koch[1] found bacilli in the majority of tuberculous lesions he examined, but still not in all, as he states himself: he only *supposes* that his bacilli, even if they escape observation, are still present in all cases and in all tubercles. His proposition, however, that in some tuberculous lesions only unstained spores of tubercle-bacilli are sometimes present, or that bacilli may be invisible, and not taking the staining when dead, or even may be absent if the tuberculous process comes to a "stand-still," is, of course, purely hypothetical. There is still another good reason for the assumption that the proportion of non-bacillary tubercles may be much larger in Koch's own examinations. As Koch says himself, he preëminently recognizes only such structures as tubercular which contain his bacillus, regardless of their morphology otherwise; it is therefore possible that he may have innocently excluded a number of non-bacillary tubercles from the list of his tubercle records. Koch himself, however, says that he failed to detect bacilli in some scrofulous glands, and in two cases of tubercular synovitis, and further admits the prevalence of bacilli in degenerated tissues.

As far as examination of tubercle-*tissues* for bacilli is concerned, only the following observations besides those of Koch are recorded (so far as is known to the writer), and with the following results:

Dr. Geo. M. Sternberg, U.S.A.,[2] who is a man recognized as a competent mycologist, here as well as in Europe, failed to find tubercle-bacilli in the lesions of several cases of tuberculosis.

Heneage Gibbs[3] also failed to discover bacilli in a number of tubercles, particularly in the reticular form; in fact, he had met several times with non-bacillary tuberculosis. Gibbs states[4] that "he had examined the lungs of guinea-pigs which had become tuberculous after being kept in the air-shafts of the Brompton Hospital for Consumptives, and had found no bacilli in them; and he knew of an instance in which a guinea-pig, inoculated with sputum from a case of phthisis, presented a glandular abscess in the thigh which abounded in bacilli, whereas the internal organs, although full of tubercles, did not yield a single bacillus."

I do not think it is likely that Heneage Gibbs, with his large experience and universally recognized skill in bacteria-stainings, would fail to discover bacilli if they had been present.

[1] I found that the "pilgrims from all nations" who (through influence brought to bear upon the authorities) succeed in being admitted for a while to Koch's laboratory, are instructed principally in the most rudimentary manipulations of mycology; and to most of them the assistants have first to point out what a bacterium looks like. Besides these "pilgrims," the German Government sends regularly young sanitary officers to be instructed in mycology. Of course this is a very useful matter to the "pilgrims" and to the young sanitary officers, even if only one out of twenty-five ever devotes himself to mycology; but it is no beneficial matter to Koch and his kind assistants, who, through this constant interruption, are terribly interfered with in their scientific work. In fact, the working of the Imperial Laboratory is sometimes completely delayed in this way, as it was last summer, during the Hygenic Exhibition. Yet the beneficial influence upon sanitary science which this excellent institution exerts is very great.

1 Berliner Klin, *Wochenschr.*, No. 15, 1882.
2 Phila. *Med. News*, 1882.
3 London *Lancet*, February 24, 1883.
4 *Lancet*, February 12, 1883.

Watson Cheyne,[1] whose anatomical conception of tubercle is inseparable from the bacillus, of course says that non-bacillary tubercles, like the above, are no tubercles at all. Hence his statement, that in all tuberculous structures (that is, in all structures which *he* calls tubercle) the bacilli are invariably present, is, from his standpoint, perfectly warrantable. He also confirms the fact that recently-formed tubercle-nodules made up of young lymphoid cells are, as a rule, without the bacilli, while the older tubercles, always containing epitheloid cells (on account of retrograde changes), usually do contain bacilli. Now, Watson Cheyne, in this connection, with great self-confidence propounds, "The bacilli being the cause of this disease (tuberculosis), only the nodules containing epitheloid cells are tubercle."[2] Still, the same writer has expressed surprise[3] that "very extensive tuberculous processes may be found in animals with only very few bacilli."

T. M. Prudden, of New York,[4] who made extensive and excellent morphological studies in reference to the occurrence of the bacillus in tuberculous lesions, *failed to find bacilli in any part of the body in three cases of profuse tuberculosis*. In one case of Prudden's, the tubercle-bacilli were abundant in the walls and edges of a lung cavity and its immediate vicinity, while no bacilli could be found in the diffuse and miliary tubercles of the rest of the body. Prudden further states, "In a large proportion of the cases in which bacilli were present; they seemed to have a decided predilection for tubercle-tissue in a degenerated and disintegrating condition, either cavities in the lungs, cheesy and breaking-down areas, or tubercular ulcers; although present with great frequency in small numbers in well-formed, intact tubercle-tissue. * * * The bacilli were present in greater abundance in the respiratory organs and intestinal tract than in other parts of the body less directly in communication with the external world. It is further evident that in nearly every case there are many miliary tubercles of all forms, and in many cases much diffuse tubercle-tissue, from which the bacilli appear to be entirely absent."

Spina[5] did not succeed in detecting bacilli in a number of cases. Even if the number of Spina's failures to see the bacillus should be larger than in cases of other observers, Koch's favorite demolishing argument that Spina and all others who failed to detect the bacillus in any case do not know *what* that parasite of his looks like, is entirely unjustifiable. Moreover, Spina's work was controlled by no less an authority than Stricker, of Vienna, and the correctness of the results of the investigation in its essential parts is vouched for by Stricker.

Cornil and Babés[6] detected the bacillus in the lesions of a number of cases of tuberculosis; but they also showed that bacilli are totally absent in some cases, and not constant in otherwise typical tuberculous lesions.

Malassez and Vingal,[1] from the results of observations of their own, state that there seems to be no doubt that true tuberculous lesions occur which possess very few or even no tubercle-bacilli.

Fräntzel,[2] in a discussion before the Berlin Medical Society, stated that he found a number of scrofulous (tuberculous) ulcers and lymph-glands not to be "bacillary."

C. Macnamara[3] reports a case of primary tuberculosis of bone and of the marrow of bone, in which no trace of tubercle-bacilli could be discovered in any of the lesions.

George Bodamer, having succeeded in staining and demonstrating the bacillus in sputum and in tissues in the spring of 1882 (immediately after the announcement of its discovery and the method of its staining by Koch, and probably prior to any one else in America), and having worked together with me nearly incessantly in bacillus stainings and cultures ever since, (including also a certain time in the pathological institutes in Germany), also failed to detect the bacillus in a certain number of typical tuberculous lesions of various kinds.

As will be seen from my report, I found tubercle-bacilli to be absent (or I could not detect them, if this expression should be preferred) in four cases of primary peritoneal tuberculosis, in two cases of primary tubercular pericarditis, in one case of tubercular joint-disease, and in several cases of miliary tuberculosis; this does not include some cases of induced animal tuberculosis which did not show bacilli.[4]

Dr. Lawrason, of New Orleans, who worked with me last spring in the pathological laboratory of the University, and who had demonstated his skill in staining bacilli in tissues before the Pathological Society of Philadelphia and elsewhere, also found tubercle-bacilli wanting in some of the most typical tuberculous lesions.

Weigert, Bollinger, Baumgarten, Ziel, Councilman, Schuchart, and Krause, and Koch's own assistants, are yet to be mentioned as having recorded a few examinations of tuberculous tissues for bacilli with negative and varying results; but detailed statements of their investigations in this direction are not known to me.

The direct conclusion to be drawn from the total evidence relating to bacilli in *tissues* just quoted is, that tubercle-bacilli are not invariably present in even typical tuberculous lesions; furthermore, that none of the investigators brought forward any proof or evidence that the bacilli are present or appear in the beginning of the disease. On the contrary, the results of the investigatons of all observers, including those of the discoverer of the bacillus himself, point plainly towards establishing the fact that tubercle-bacilli inhabit preëminently disintegrated tissues.

2. *Examinations of the blood and lymph intra vitam* of patients suffering from tubercular disease, which

[1] *Practitioner*, April, 1883.
[2] See p. 309, loc. cit.
[3] Page 316.
[4] *Medical Record*, April 14, and ibid, June 16, 1883.
[5] Studi n über Tuberculose, Wien, 1883,
[6] *Le Progrès Médical*, 1883.

[1] *Le Progrès Médical*, No. 20, 1883, and in a second communication quoted by the *Lancet*, Dec. 15, 1883.
[2] *Berliner Klin. Wochenschr.*, December, 1883.
[3] *Brit. Med. Journal*, Dec. 15, 1883.
[4] At this point I wish to correct an impression which a certain statement in one of my former communications on this subject seemed to convey—namely, that bacilli are invariably present in tuberculous products.

in my opinion would be quite an important matter in the study of tuberculosis, are not recorded by any observer. All attempts which we made in examining the blood of tuberculous patients during life gave, as will be recorded later, negative results. It is true that we observed in specimens post-mortem some blood-vessels filled with thrombi containing a few bacilli. Further, there are records by Cornil, Weigert, Ponfick, and Koch relating to bacilli observed post-mortem in the walls of veins, of large lymph-ducts, and of arteries, in tuberculous cases. As to the route and manner by which the bacilli gained entrance to these places, inferences might be drawn, but no definite conclusions arrived at until the bacilli have been observed during life in the blood or lymph. I will not touch upon this part of the question at present.

The blood from cases of hæmoptysis as expectorated has been examined by Hiller[1] and Williams,[2] and bacilli discovered, but no inference from this can be made as to the bacilli in the circulating blood.

3. *Examination of products discharged or eliminated with the excretions* by individuals suffering from tuberculosis has been practiced quite extensively, and by a number of observers especially in reference to phthisical sputum. To these sputum-examinations I will return immediately.

There are a few investigations recorded in reference to tubercle-bacilli in the fæces, in discharges from the ears and in those from the nose, and in urine voided by patients affected with local tuberculosis of the pertaining parts. Tubercle-bacilli were often detected, and thus a diagnosis of tubercular enteritis, tubercular otitis, and tubercular meningitis, (if bacilli in nasal discharge) and tuberculosis of the urinary tract, was made.

The tuberculous nature of ulcers, of synovitis, and of surgical lesions of various locations, it is claimed has been occasionally settled (?) in this way.[3] But, on the other hand, the discharges from some typical tuberculous lesions failed to show bacilli.

Damsch[4] claims that tuberculosis of the genito-urinary tract can be diagnosticated by inoculating a drop of urine from such a case into the anterior chamber of the eye of a rabbit, which operation will be followed promptly by iris tuberculosis in the animal. This latter observation, however, I believe, requires confirmation.

The examinations of sputum, practiced now probably by all microscopists in the world, proved to be of much more value. I will quote the observers who made and recorded more or less extensive examinations of sputum, and the results and conclusion they arrived at, to show that there are some points which are misinterpreted by some clinicians and others.

Koch[5] does not claim that sputum from every phthisical case contains bacilli; he met with cases without bacilli in sputum. He did not find, however, bacilli in cases said not to be tubercular.

[1] *Deutsche Med. Wochenschr.*, No. 47, 1882.
[2] London *Lancet*, Feb. 24, 1883.
[3] Schuchart and Krause, in Volkmann's Clinic, Chirurg. Centralblatt, 1883.
[4] Deutsch. Arch. f. Klin. Med., 1882.
[5] Loc. cit.

Ehrlich[1] records twenty-six cases of phthisis in which bacilli were invariably present in the sputum; in other lung affections similar bacilli were not found.

Balmer and Fräntzel[2] examined one hundred and twenty cases of phthisis for bacilli with positive results, and came to the conclusion that the quantity of bacilli was in direct proportion to the gravity of the disease, and that the bacilli were larger and often contained spores in acute cases, and were smaller in size and quantity in chronic cases. They never saw bacilli in the sputum of cases other than phthisis. They also quite properly conclude "that the sputum affords to bacilli a more favorable place of growth than does the still living lung-tissue," because they found bacilli to be extremely scanty in the tuberculized lung-tissue surrounding a cavity, while the contents of the latter and cheesy degenerated parts of the lung were crowded by them.

Heron[3] records sixty-two cases of examination of phthisical sputum, in which bacilli were constantly present.

D'Espine[4] records examinations of sputum from twenty-five cases, but could not confirm the correctness of the assumption that the bacilli stand in any relation of quantity to the gravity of the disease, although he affirms that they are constantly present.

Williams,[5] having examined the sputum of one hundred and thirty cases for bacilli, with only three negative results, concludes, however, that there was "no definite ratio between the activity of the disease and the number of bacilli, although they were few in cases where the disease was quiescent."

Kowalsky[6] claims to have examined the sputum of six hundred cases of phthisis, with bacilli nearly invariably present.

Chiari,[7] in a number of cases examined, never failed to find bacilli.

Fiehl[8] found bacilli in the sputum of seventy-three, Doeschfeld [9] of forty-six, and Gradle and Woltmann[10] in thirty-five consecutive cases of phthisis examined.

Detwiler and Meissen[11] examined eighty-seven cases of phthisis, finding bacilli in all but two. Although bacilli were more numerous wherever great destruction of lung tissue existed, they did not observe any definite ratio of bacilli in sputum to the gravity of the disease. The presence of elastic tissue in sputum they consider as significant for diagnosis, and as constant as that of bacilli.

S. West[12] found bacilli present in every case of phthisis which he examined, though in some cases they were present in such small numbers as only to be found after repeated and very careful examination. He further adds: "The more cheesy matter or fluid from a cavity there was in the expectoration, the more bacilli we might expect to find; consequently, in a

[1] *Deutsche Med. Wochenschr.*, No. 19, 1882.
[2] *Berliner Klin. Wochenschr.*, No. 45, 1882.
[3] London *Lancet*, Feb. 2, 1883.
[4] London *Lancet*, Jan. 13, 1883.
[5] London *Lancet*, Feb. 24, 1883.
[6] Wien. *Med. Presse*, Feb. 24, 1883.
[7] Ibid., No. 1, 1883.
[8] *Deutsche Med. Wochenschr.*, No. 5, 1883.
[9] *Brit. Med. Jour.*, Feb. 17, 1883.
[10] *Med. News*, Feb., 1883.
[11] Berliner *Klin. Wochenschr.*, Nos. 7 and 8, 1883.
[12] London *Lancet*, Feb. 10, 1883

case of acute tuberculosis, before breaking down of the lung, we should expect to find none." He also states that there seemed to be but little variation in the size of the individual bacilli in different cases, although bacilli in acute cases appeared to contain spores.

R. S. Smith[1] records seventy-seven cases in which he had made the examination of sputum; of these, forty-nine were from "tubercular phthisis," and invariably showed bacilli; the remaining twenty-eight, comprising various other affections of lungs, some of them closely simulating phthisis, did not show bacilli. The affections examined with negative results were such as "chronic bronchitis, bronchiectasis, chronic syphilitic pneumonia, slight hæmoptysis with no evidence of any disease, chronic pleuro-pneumonia with dulness on percussion and copious purulent expectoration, chronic pleurisy, apex pneumonia with subsequent breaking down from gangrene and with cavity (?), sarcoma of lung, gray hepatization, congestion from mitral disease, diabetes with bronchitis, two cases with strong family history of phthisis, cough with purulent expectoration, but with no evidence of local disease in lungs," etc. Bacilli were also wanting in "slight phthisical cases when the patients were rapidly recovering." I think, however, that errors in physical diagnosis can by no means be fully excluded here.

Heneage Gibbs,[2] from his extensive observations, states that the sputum did not show bacilli in some cases which upon the autopsy-table showed the lungs riddled with tubercular masses: he explains that the patient died before the destructive process had gone far enough to cause the bacilli to be ejected.

Whipham[3] records twenty cases which he studied in relation to bacilli in sputum, and made the observation that the bacilli disappear from sputum at times when the condition of the patient improved.

The report upon the examinations of sputum for bacilli from the pathological laboratory of the University of Pennsylvania will embrace the results from nearly two hundred cases of pulmonary diseases observed. These show that bacilli in sputum are diagnostic, but not prognostic, in phthisis; that the old-fashioned test, the presence of pulmonary elastic tissue in sputum, is a very reliable one (gangrene and abscess being so easily excluded); and, further, that the absence of tubercle-bacilli in sputum proves nothing.

Spina and Stricker[4] met tubercle-bacilli in simple bronchiectasis, bronchitis, croupous pneumonia, etc.

Sattler, in the translation of Spina's book,[5] page 164, adds the record of an autopsy of a case of similar nature mistaken for phthisis on account of bacilli in sputum.

Kundrat[6] related a case which occurred in the spring in Nothnagel's clinic, where a diagnosis of tuberculosis was based upon the detection of bacilli; but, post-mortem, the case proved to be one of chronic catarrh with bronchiectasis. He also mentioned a case, under Prof. Schrötter, where bacilli were repeatedly found by himself and others, and the necropsy showed only bronchitis and emphysema. Hence, he was not disposed to admit that the discovery of bacilli in the sputum was absolutely diagnostic of tubercle.

Riegel, of Giessen, and others, failed to find bacilli in the sputum of cases of diabetic phthisis. But I think the diabetes had nothing to do with keeping the bacilli out, as I have detected multitudes of bacilli in the sputum from a case of diabetic phthisis observed and confirmed by autopsy by Dr. Charles H. Reed, of this city.

Levinsky[1] and Koryanyi[2] both detected tubercle-bacilli in the sputum of patients with syphilitic lesions of the lung.

It is very probable that many of the cases of pulmonary disease in which bacilli were not discovered might nevertheless have been phthisical: in fact, the character of the control cases, as given by R. S. Smith (quoted above), fully justifies such assumption. From the autopsy-experience of clinicians and pathologists whom I consulted, and from observations of my own, I can testify that the only sure way to decide the nature of doubtful cases, such as, for instance, those recorded by Smith, is the autopsy: otherwise the negative evidence in relation to bacilli goes for naught, This is also substantiated by the observations of Gibbs, Whipham, and West, quoted above, viz.: that bacilli may fail to appear in sputum where there are no cavities and no ulceration in the lung. I have seen autopsies reveal phthisis in cases where no bacilli were found during life, after careful examination over and over again repeated; and I also happened to witness the autopsies of three cases of non-tubercular lung disease which during life had been diagnosticated phthisis on account of bacilli discovered in the sputum.

The examination of sputum may thus, in doubtful cases, be quite misleading; for if, in any given case, bacilli are not found, it should be taken into consideration, *first*, that the bacilli may be enclosed in the tubercle-tissue, as in miliary tubercle, which rarely produces destruction of the lungs, and consequently they may fail to appear in the sputum; and, *second*, that the examiner may fail occasionally in any case to succeed in preparing a successful preparation of stained bacilli. On the other hand, if bacilli are present, they sometimes may not be pertaining to the case, but be accidentally introduced through use of a vessel uncleansed and used by another patient, or otherwise; and, finally, it may be inferred, but it is by no means proved under rules of scientific scrutiny, that similar bacilli do not occur in the sputum of cases other than tubercular.

From our present knowledge of the occurrence of Koch's bacillus in sputum we must therefore conclude:

1st. That the presence of bacilli is a valuable *diagnostic* sign of tubercular disease of the lung.

2d. That the quantity of bacilli found does not, as

[1] *British Med.-Chirurg. Jour.*, July, 1883.
[2] London *Lancet*, Feb. 24. 1883.
[3] Ibid., Feb 10. 1883.
[4] Loc. cit.
[5] Cincinnati, 1883.
[6] Discussion before the Vienna Medical Society, *Wiener Med. Presse*, 1883.

[1] *Deutsche Med. Wochenschr.*, No. 11, 1883.
[2] *London Med. Record*, March 15, 1883.

a rule, indicate the degree of the disease, and hence is *not a prognostic sign.*

3rd. That the absence of tubercle-bacilli is *no proof whatsoever of the absence* of tubercular disease.

4th. *The examination of air*—viz.: *of the breath of patients* suffering with pulmonary tuberculosis, and of the air of sick-rooms and hospitals generally—has given some positive, although not definite, results.

C. Theodore Williams [1] "recently selected one of the ventilation-shafts at the Brompton Hospital for Consumptives in which the flues of several wards converge, and in which extraction takes place at the rate of three hundred to four hundred feet a minute. In this current he suspended glass plates smeared with glycerine for a period of five days. The plates were then washed with distilled water, the fluid mixed with a little mucilage and evaporated down to half, and the residue tested for bacilli, which were found in fair abundance."

R. C. Smith [2] "succeeded in demonstrating bacilli in the breath of consumptive patients by making them breathe through two thin sheets of gun-cotton placed in the outer compartment of an ordinary respirator. This layer of cotton is then converted into collodion, run in thin films on slides, and stained for bacilli."

A. Ransome,[3] on examining the breath of several advanced cases of phthisis, found specimens of bacillus in two cases, while in several other cases the organism was not found, and it was not found in the aqueous vapor condensed in the waiting-room of the Manchester Consumption Hospital. The collections had been made by exposing cover-glasses smeared with fresh white of eggs or a little mucus for a certain length of time. Gibbs' method was used in staining.

Celli and Guarneiri[4] made similar examinations with quite different results. They were unable, after the most careful search, to find tubercle-bacilli in the air of an unventilated room in which phthisical patients had been sleeping. The expired breath of those patients was likewise found to be entirely free from bacterial contamination. Nor could the tubercle-bacilli be discovered in air which had been passed through the sputa of tuberculous patients, although in every case the expectorations were found to contain them in large numbers. (They were also unsuccessful in attempts at inoculation with fluids impregnated with this presumably vitiated atmosphere).

Profs. Sarmoni and Marchiafava[5] examined the breath of a number of phthisical patients for bacilli, with absolutely negative results. (They conclude that phthisis is not directly contagious, but might be indirectly so by means of dried, powdered sputum, which floats as dust in the air).

V. Wehde[6] made, under direction of Bollinger, in Munich, the following experiments in relation to examination of air. Plates smeared with glycerin were exposed for forty-eight hours in closed roms in which there were a number of advanced acute cases of phthisis. No bacilli could be found after applying the usual tests in an appropriate manner. (He further testifies that after injecting the material collected, as above stated, into the peritoneal cavity of eleven rabbits and guinea-pigs, no tuberculosis was produced).

5. *Comparative studies of animal tuberculosis.*—Spontaneous animal tuberculosis is unquestionably identical with human tuberculosis. There are a few morphological specializations, which I mentioned in a former chapter,—*e. g.*, in tuberculosis of birds and in bovine tuberculosis or pearl-disease; but the essential, peculiar histological features are the same in all. Tubercle-bacilli appears also to be present in nearly all cases of spontaneous animal tuberculosis. I detected bacilli in a tuberculous bronchial lymph-gland from a phthisical tiger, which I had kept in alcohol for eight years, and in one from a monkey of more recent date; and several times I found bacilli in spontaneous bovine, chicken, rabbit, and guinea-pig tuberculosis. I also studied tuberculosis in the bear, lion, leopard, and in a large variety of apes (dead of typical consumption, from the Zoölogical Garden), with results identical with those obtained from studies in man. But this was long before the "outbreak" of the "bacillary campaign," and consequently Koch's parasite was not looked for in these latter cases.

Bollinger[1] found bacilli in the udder of a cow affected by pearl-disease (bovine tuberculosis).

There are no observations on record concerning the occurrence of tubercle-bacilli in the excretions and the manure of animals affected by tuberculosis (sputum is not produced by animals),—not even any reliable observation of bacilli in the milk.

Artificial or induced tuberculosis in animals will be considered in connection with the experiments farther on.

6. *The occurrence of bacilli in lesions and substances other than tubercular.*—Bacilli not distinguishable from tubercle-bacilli are met with in lupus and leprosy. The bacillus met with in lupus is unquestionably identical with the tubercle-bacillus, as is evident from the investigations of Max Schüller, Pfeiffer,[2] Dontrelpont,[3] and Babès and Cornil.[4] Yet the dermatologists are hardly inclined to recognize lupus and tubercle as inseparable, there being already a defined tuberculous lesion (the scrofuloderm) on the dermatological list, and, further, they refuse to identify the two lesions on clinical and anatomical grounds.

The bacillus of leprosy, in specimens which I had the opportunity to examine, appears to me also perfectly identical with the small forms of tubercle-bacilli; although the lepra-bacillus may perhaps look more sharp-pointed to the eyes of others, and may fail to take the brown stain. There is nothing surprising in the fact that the same species of bacillus

[1] Quoted from the London *Lancet*, July 28, 1883.
[2] *British Medical Journal*, Jan. 20, 1883.
[3] *British Medical Journal*, Dec. 16, 1882.
[4] Quoted by the New York *Record* from the *Gazzeta degli Ospitali*, No. 56, 1883.
[5] Annali Universali di Medicina, Sept., 1883.
[6] Prager *Med. Wochenschr.*, Jan., 1884.

[1] *Centralblatt f. d. Med. Wiss.*, August 18, 1883.
[2] *Deutsche Med. Wochenschr.*, No. 19, 1883.
[3] *Monatsheft f. Praktische Dermatologie*, No. 6, 1883.
[4] Loc. cit.

inhabiting soils of different character and different chemical composition, perhaps, may acquire varying micro-chemical properties and slight modification in shape. The experiments of Damsch[1] further suggest the identity of leprous and tubercle-bacilli in their effects. There is no reason to believe that leprosy is a variety of tuberculosis, yet we must either declare lupus, leprosy, and tubercle to be identical lesions, or else declare the tubercle-bacillus not to be peculiar to tuberculosis.

I observed bacilli not distinguishable by the shape and micro-chemical tests from tubercle-bacilli in the false membranes in two cases of diphtheria, and in one case of scarlet fever with extensive pseudo-membranous angina. Two of these cases proved fatal; the autopsies did not reveal tuberculosis in any part of the body. The false membrane was prepared by crushing it between two cover-glasses, and was treated like sputum.

In syphilis of the lung the cheesy material and the sputum (as above stated) was found to contain tubercle-bacilli by Levinsky,[2] and also by Koryanyi.[3]

Lichtheim[4] and Craemer[5] may be mentioned yet in this connection, as having each found the tubercle-bacilli, or bacilli like them in every respect, in the fæces of a number of non-tuberculous patients, as well as in the tuberculous. This is, however, energetically contradicted by Gaffky, of Koch's laboratory, on the ground that he (Gaffky) failed to discover in fæces of normal persons in Berlin any bacilli which reacted to micro-chemical tests like tubercle-bacilli.

The discovery of Professor Bologh[6] that bacilli similar to tubercle-bacilli are found in the marshes around Pesth, Koch also tries to demolish by the statement that such bacilli were not detected in the mud of a Berlin city canal.

In sections of phthisical lungs I often observed masses of bacilli in those portions which were without tubercles, but which were affected secondarily by simple acute inflammatory changes, and the air-vesicles merely stuffed with exudate undergoing rapid disintegration (coagulation necrosis); while the real tubercle-tissue contained no bacilli, or sometimes only a few in the giant cells. I think Prudden[7] also noted this.

Surveying now the whole question of the habitat of the bacillus tuberculosis, it becomes evident that Koch's dogma—that only that is tuberculosis, and everything is tuberculosis, where his bacillus is found—is overdrawn and cannot bear criticism. It would be much safer to reverse this proposition, and to *consider that bacillus alone a tubercle-bacillus which inhabits evident tubercular lesions* or their products,—*e. g.*, sputum, and nothing else. For we have no difficulty in diagnosticating under the microscope a tubercle without the bacillus; but *a dilemma arises at once if we see questionable bacilli without the tubercle, or outside of sputum.*

[1] *Centralblatt f. d. Med. Miss.*, July 21, 1883.
[2] Loc. cit.
[3] Loc. cit
[4] Fortschritte der Med., vol. i, 1883.
[5] Sitzungsbericht der Societät in Erlangen, December 11, 1882.
[6] *Wiener Med. Mochenschr.*, No. 51, 1882.
[7] Loc. cit.

VI.—EXPERIMENTS AND EVIDENCE, "PRO" AND "CONTRA."

It has been shown that the clinical evidence in reference to the contagiousness of phthisis is so meager that assertions as to its parasitic origin are unwarranted. (see chap. iv.) Moreover, statistics negative such theory. This being the case, it would seem as if experimenters are trying to prove that which is not the reality.

The testimony of the defenders of this theory, however, appears strengthened since the publication of the discovery of the bacillus and of the experiments of Koch. This is to be in a measure explained by the impression which Koch's well-constructed article made upon the minds of some of our leading clinical teachers, who involuntarily felt themselves induced to teach and to write about the doctrine of the contagiousness of phthisis. The profession at large does not care for Koch's discovery, whatever its value may be; but the opinion of the leading clinicians endorsing such discovery forms a guide, and may prove one of the most efficacious means of influencing the profession in regard to the question of the contagiousness of phthisis.

Having arrived, from my own experiments, at conclusions different from those of Koch, I thought it at present timely to announce at least the results of my observations, as my detailed report can not appear for some months to come. It is my personal observations, together with my conclusions obtained from a careful perusal of the control experiments and of the records of the observations of others, which have determined my present attitude in the question of the ætiology of tuberculosis.

The total evidence *pro* and *contra* gives me the impression that the doctrine of the contagious character and parasitic causation of tuberculosis can not be sustained.

I will now submit a brief analysis and summary of experiments made and evidence offered in relation to the question of the parasitic origin and specific nature of tuberculosis.

For the establishment of a theory in regard to a parasitic origin of a disease by means of experiments on animals, etc., the following propositions must be affirmatively decided:

1. The disease produced experimentally in animals by means of inoculation with products of the human disease, must be proved to be identical with the disease occurring spontaneously in man.

2. There should be some evidence showing that inoculation in man is followed by the same results as follow the inoculation of the same material in animals; and that the disease is really contagious.

3. There must be found a definite parasite at the beginning of the diseased process in all cases, and in all tissues involved by the disease, and in sufficient quanity to account for the changes.

4. Given a parasite that is the cause of the disease, its action should be specific, *i. e.*, it alone should be the causative factor, and should, when isolated and inoculated into an animal liable to the disease, always produce that disease.

5. The lesions of a disease resulting from the inoculation ot a specific parasite must also contain that parasite, and the specific properties of reproducing the same disease when re-inoculated.

6. Finally, a given parasite and no other substance should, the conditions remaining the same, be capable of producing the disease.

Koch makes an effort to answer all the above propositions in the affirmative in reference to tuberculosis. As a thorough and experienced mycologist, he knew that this is unavoidably necessary in order to establish the ætiological relation of his bacillus to tuberculosis.

Tuberculosis was known before Koch to be inocuiable, and was, upon popular notions and traditionally, regarded by some as a contagious disease. Taking such theory for granted, it was necessary to find the parasite. In fact, Klebs, Toussaint, Max Schüller and Aufrecht made excellent investigations, which even suggested the parasitic nature of tuberculosis, although the proofs offered by these investigators were not sufficient.

Koch's investigations, with his superior advantages, methods and diligence, have been crowned with better success, and have brought forward facts of standing and permanent value to mycology, botany, and partly to medicine. His evidence in the question of the parasitic nature of tuberculosis is strong, but his conclusions from this evidence were overdrawn and too hasty. They are, thus far, not so much justified as he and his followers think they are. There is great lack of that absolute proof that is necessary for the settlement of a question of such magnitude and social importance.

Koch has, in relation to tuberculosis, brought forward definite affirmative proof for only some of the above-named propositions, and this, again, *only partial*. Valuable contributions to this end have been also made by others. But we must have *full proof for each and all* of those propositions, and these must be really applicable to tuberculosis, before we can accept the theory of a parasitic character and of the contagionsness of this disease.

Submitting now, a brief criticism of the bacillus theory of Koch and his followers, I will take up separately each of the above-stated propositions, all of which it is necessary to prove in the affirmative before there is any reason for the establishment of such a theory in regard to tuberculosis.

1. *The disease produced experimentally in animals by means of inoculation with products of human disease, must be proved to be identical with the disease occurring spontaneously in man.*

In favor of the identity of human tuberculosis with that produced experimentally in animals there has been brought forward the fact that the products in both contain identical bacilli. But this surely does not prove the identity, because similar bacilli may be found in the lesions of various kinds of processes, resulting in cheesy products. (See bacillus chapter.) Besides, there are many spontaneous and artificially-induced tubercular lesions in which bacilli could not be demonstrated. Hence, we can not rely upon the bacilli as a proof for the identity of the lesions.

Koch, and those who imitated his experiments, diagnosticate and declare all those artificially-induced lesions as tubercular which occur in nodes and in which they found the tubercle-bacillus, without taking (so far as I know) into consideration any structural peculiarities or other conditions. Now, tubercle-bacilli will surely be found in the lesions, whatever these may be, as they were introduced into the animal in those experiments. Further, in the opinion of these gentlemen nothing is tubercle where there are no tubercle-bacilli. Therefore, how can we rely upon their statements as to what the lesions they induced in animals really were?

It is hardly within the province of the mycologist to teach us what is tubercle and what is not tubercle.

Tuberculous lesions with extensive cheesy changes and tissue-destruction, cavities, etc., such as occur spontaneously and often quite speedily in man or animals, cannot be induced experimentally by means of inoculation, unless very large quantities of some purulent tuberculous materials are used, and abscesses result. When an animal dies several or many months after the operation of natural tuberculosis, extensive caseation of the organs may occur.[1] The only kind of induced or artificial tuberculosis in animals which may be ascribed to the effects of inoculation is one that corresponds in naked-eye appearance to secondary miliary eruption of tubercle as occurring in man—the acute miliary tuberculosis. This acute miliary tuberculosis in man, which I observed also in animals as a syontaneous disease, occurs only in wasting diseases accompanied by various grave symptoms, anæmia, and great emaciation; while the induced disease in animals occurs suddenly, and induces no symptoms, no blood-changes, no emaciation, etc.

In many instances where the experimenters have produced, by means of tuberculous materials, within two to eight days after the operation, a miliary eruption, it is not probable that those miliary nodes were tubercles, and were due to the effects of bacilli, which are known to grow extremely slowly, and it is not certain that the experimenters took pains to distinguish them from true tubercle, or were competent in all instances to do so. This is eminently true of the inhalation tuberculosis.

Tappeiner's induced inhalation tuberculosis ot dogs,[2] so much relied upon by Koch and others for the establishment of the mode of the spreading of phthisis, and partly of the bacillus doctrine itself, has been proved to be a fiction. Tappeiner, as so often quoted, subjected dogs to an atmosphere heavily charged with phthisical sputum, so that the dogs were nearly bathed in the latter (known to contain bacilli, for weeks. But, in spite of this, the animals grew fat, if anything, and, after the lapse of a certain

[1] I was much surprised last summer to see in Berlin, at the Hygienic Exhibition, in Koch's pavilion, specimens of the character just stated exhibited as inoculation-tuberculosis, and still more to hear the demonstrator explain (surely without being authorized by Koch) that these specimens were to demonstrate the rapid effects of the bacillus.

[2] Virchow's Arch., lxxiv, 1878, and ibid, lxxxii, 1880.

time, acquired local pulmonary affections in the form of nodules, not likely to have been tubercular in nature, of which only in one case were some observed in the liver and kidneys.

The experiments of Schottelius,[1] Wargunin and Rajewsky,[2] Weichselbaum,[3] and of others,[4] and my own experiments also (to be reported subsequently), make Tappeiner's assertions perfectly untenable. Tappeiner's own account of his experiments, and the microscopical description of the structure of Tappeiner's "tubercles," by Grawitz and Friedlander in Virchow's institute, clearly indicate that he had nodular broncho-pneumonic foci, and not tubercles. (See explanation of these formations in the first chapter of this paper.)

I will, however, show later that pulmonary tuberculosis may occasionally be produced in rabbits by these means.

Furthermore, the bacillus theorists assert that inoculation-experiments, and these alone, can prove the tubercular nature of the nodular eruptions obtained artificially in animals. The identity with human tubercle is considered established, because inoculation nodes from the animal and tubercles of man act alike. They claim that whatever can produce tubercle on inoculation contains the tubercular virus, and is tubercle. Under such conception, finely-powdered sterilized glass should be classed with tubercle, because it, as I can reaffirm now, is capable of inducing tuberculosis when introduced into the tissues of healthy animals.

The following deserves a passing mention. According to Orth[5] and Bollinger,[6] there is some doubt as to the identity of human and animal tuberculosis. The results of the experiments of both these observers show that tuberculosis could only be induced by feeding animals with materials from animal tuberculosis; while tuberculous materials taken from man had no effect upon animals when given as food. On the other hand, the Würzburg feeding experiments upon man[7] prove that animal tuberculous materials have no effect on man.

Although, judging from my own experiments, there is to my mind no doubt that some forms of artificially-induced tuberculosis in animals acquire gradually characters which make them identical with the spontaneous tuberculosis in man or beast, yet I do not think it is at all proved that the lesions so rapidly arising from the effects of the inoculation with the bacillus of Koch are identical with tuberculosis in man. The proof, then, upon this point, the supreme one for the settlement of the question of the nature of tuberculosis, is yet to be furnished.

2. *There should be some evidence showing that inoculation in men is followed by the same result as follows the inoculation of the same material in animals, and that the disease is really contagious.*

[1] Virchow's Arch., lxxii., 1878, and ibid., xci., 1883.
[2] Vratsch, No. 6, 1882.
[3] Centralblatt, No. 19, 1882.
[4] To the same conclusion, I hope, will also come my esteemed friend Prof. Brose, if he repeats his experiments published in the *Medical Record*, January, 1884.
[5] Virchow's Archives, vol. lxxvi.
[6] Arch. f. Exper. Path., vol. i.
[7] Schottelius, loc. cit.

In favor of the direct inoculability of tuberculosis in man the following is presented:

At a recent meeting of the Académie de Médecine, M. Verneuil related the following history. In July, 1877, a house surgeon (*interne*) at the Ste. Eugénie Hospital, who performed all the post-mortem examinations, one day noticed a papule at the base of the nail of his third finger. The apex presented a white spot, and a few drops of pus escaped from it. It was frequently cauterized, but the phalanges became attacked, and a cold abscess spread over the back of the hand. After three years' treatment, having failed to produce any improvement, M. Verneuil amputated the finger. The house surgeon was believed to be cured, and practiced in the provinces. Quite recently he has been again attacked by cold abscesses in the lumbar region, causing intense pain; during violent attacks of pain the arms exhibit clonic convulsive movements. M. Verneuil has operated a second time. He is convinced that his patient became inoculated with tuberculosis when performing a necropsy. A similar misfortune happened to Laennec. One day, when operating on a tuberculous patient, he slightly cut himself with a saw. A swelling appeared on the wounded part. Laennec cauterized it with antimony chloride. The swelling disappeared, but twenty years subsequently he died from tuberculosis.[1]

We have seen that clinical evidence and statistics do not elucidate a contagion for tuberculosis, and that the few isolated instances of apparent contagion offered cannot stand the test of scientific scrutiny. An infectious or contagious disease can have only one cause, and cannot be at one time due to a contagion, and at other times arise from a variety of causes; hence the latter part of the proposition must be answered in the negative.

This being the case, the *parasitic* origin must also be denied it, as a necessary consequence:

As to the first part of the proposition, too little is known of scientific observation upon this point in regard to tuberculosis. According to the exhaustive investigation of Dr. Law,[2] there is no evidence that tuberculosis has ever been conveyed through vaccination.

I must mention, though, an actual inoculation-experiment upon man, not so much on account of its inherent value, as because it has been quoted with great reliance in support of the infectiousness of tuberculosis. Demet, Paraskeve, and Zallonis, in Syra, Greece,[3] "inoculated a man of 55 with tubercle. He was suffering from gangrene of the left great toe, due to the obliteration of the femoral artery, and his death was inevitable, as he had refused to submit to amputation. His lungs were carefully examined and found to be sound. They inoculated the upper portion of the right leg with sputa from a man who had abscesses in his lung. Three week later there were signs of commencing induration at the summit of the right lung. The patient died on the thirty-eighth

[1] Paris Correspondence of the *British Medical Journal*, quoted by Boston *Med. and Surg. Journal*, No. 10.
[2] National Board of Health Bulletin, No. 40, 1882.
[3] Quoted by *Med.-Chir. Review*, Oct., 1874, from *Gazette Médicale*, 1872, page 192.

day after the inoculation, from gangrene. At the necropsy there were found at the apex of the right lung seventeen small tubercles, varying in size from that of a mustard seed to that of a lentil. Two similar tubercles were found in the left apex, and two others in the liver. The experimenters concluded that the embryonic state of the tubercles and their limited number were due to the short time since the inoculation."

This isolated experiment, as well as any of the experiments on animals, is valid only when we take it for granted that the experimenters are able to differentiate spontaneous from artificially-induced tuberculosis. This is not probable in the case just quoted. We are told that the man experimented upon was suffering from an exhausting disease, and it is well known that at least one-third of the autopsies in such cases reveal tubercular disease.

Directly bearing upon the proposition under consideration are again those Würzburg feeding-experiments, in which material known to be infested by tubercle-bacilli was used, often raw, for years as food, under strictly scientific supervision, with absolutely negative results, and which tended to show that man does not react at all upon the tubercle-bacillus.

3. *There should be found a definite parasite at the beginning of the diseased process, and in sufficient quantity to account for the changes in all cases, and in all tissues involved by the disease.*

In relation to tuberculosis this proposition cannot be answered in the affirmative; and it is by no means as definitely settled as some high clinical authorities hold with Koch, that there is but one "specific parasite" in tuberculosis.

Klebs,[1] Toussaint, and Schüller[2] have observed *micrococci* to be constantly present in tuberculous lesions and products (and have induced artificially the disease with the isolated micrococci), and no one has *proved* anything to the contrary; while Koch and Baumgarten[3] discovered *bacilli* in the same lesions. Koch claims for his bacillus more than is consistent with the laws of physiological and pathological life and sound argumentation, and more than is in correspondence with the actual proofs offered in relation to the pathogenetic properties of this bacillus.

The reports of some competent microscopists and pathologists (when the originals are examined) show that the tubercle-bacillus is not invariably present in all cases and all products of tuberculosis; and, if present, it is often not seen in sufficient quantity to ascribe to it the claimed significance; and, furthermore, it is, as a rule, not present in the beginning of the disease. On grounds of personal investigation I can offer similar testimony.

The bacilli should be present in every lesion and in all cases, and in the beginning of tubercular disease, and not chiefly in its degenerated products, if tuberculosis is to be called a parasitic disease, in accordance with the laws of pathology. In all well-established parasitic diseases the parasite is a necessary factor, and is invariably present, unless there should be established for the "tubercle parasite" an exceptional, new, and mysterious mode of action.

The truth of the matter appears to be, and, indeed, from my daily observations in the laboratory upon a large quantity of material, I regard it as a fact, that the tubercle-bacillus of Koch is a mere concomitant of cheesy disintegrated materials, even if it be preëminently of tuberculous cheesy materials.

4. *Given a parasite that is the cause of a disease, it should, when isolated and inoculated into an animal liable to that disease, always reproduce that disease; but its action should be specific,—i. e., it (the parasite) alone should be the causative factor.*

There is no doubt that Koch's tubercle-bacillus, when isolated and cultivated for many generations and then inoculated into certain animals, is capable of inducing tuberculosis, or a nodular eruption not distinguishable from it, more readily than other irritants, so far as tried. Success in inoculating is particularly frequent in rabbits and guinea-pigs (although not so common as Koch claims), but only conditional and rare in other animals.

Thus it appears that the above proposition could be answered for tuberculosis and the bacillus in the affirmative if only the following points were proved:

1st. That the nodular lesion thus induced is really tuberculosis, identical with the human disease.

2d. That this bacillus is the only bacterium or the only irritant capable of inducing tuberculosis; and,

3. That its action is specific,—*i. e.*, that the bacillus is the only agency or factor at work, the sole cause of the disease.

The first point is not proved, as probable as it may appear. The other points are open to the following considerations and objections:

It has been proved that in tuberculosis micrococci, as well as bacilli, are causal, the evidence being "strong" for either "parasite;" whereas the bacillus alone should be the causal factor. As long as not *disproved*, Kleb's, Toussaint's, and Schüller's investigations (in relation to the micrococci as causal factors) have as much claim as Koch's. The method of cultivating those tubercle-micrococci, as practised by those investigators, was one not favorable for the development of the tubercle-bacilli. Further, Watson Cheyne's assertion that bacilli *must have been* present in the cultured materials with which those investigators inoculated successfully, is altogether a gratuitous assumption, and his few and imperfect control experiments with Toussaint's micrococci were not satisfactory, and, in fact, neither prove nor disprove anything.[1] Koch did not try the effects of any other fungus than that of his bacillus in relation to tuberculosis.

Koch further claims that the specific character of his bacillus is supported by the rapidity of its effects, and brings forward the inhalation experiments of Tappeiner and the experiments upon the eye. The former I have shown to be valueless, as those nodules

[1] Klebs now admits the bacilli, but denies that they are invariably present, and denies on grounds of experiments their exclusive pathogenetic properties, although he admits that they are a not unimportant admixture to his micrococci.

[2] Loc. cit.

[3] Loc. cit.

[1] See Watson Cheyne's report, *Practitioner*, April, 1883, pp. 272–276.

produced in the lung, especially if rapidly formed, are not tubercles. I have also reason to believe that the same is the case with many of the experiments on the eye, especially in those cases in which an apparently acute miliary tuberculosis of the lung rapidly followed the inoculation; in fact, in some instances this eruption occurred in a much shorter time than is at all possible for tubercles to develop.

Koch has not proved that his bacillus is the only agency at work in the production of tuberculosis. Although he undoubtedly inoculated the pure bacillus, he ignored the specific reaction of the soil; and it is the latter which I hold plays the most important *role* in determining the formation of tubercle. In introducing the bacillus into the animal organism, another factor—the injury inflicted, and its effects upon the living cells of the body—must be taken into consideration.

In some animals all the tissues of the body react equally upon the introduction of irritants; in others only some one of the tissues responds, such as the serous membranes. This surely demonstrates the specific action of the soil.

I must again call attention to the fact that in making his experiments, Koch injected the bacilli into any part indiscriminately in scrofulous animals, while in non-scrofulous animals (dogs, rats, cats) he injected them only into the peritonæum or the anterior chamber of the eye, where, we know from experience and from repeated experiments, any irritant of sufficient intensity may create tuberculosis.

This cannot be explained by the assumption of Koch that the bacillus must merely be enclosed in something, so as not to be eliminated, before it can exert its effect.

To me it appears that the reason why we must inoculate in serous cavities to produce tuberculosis in the dog or cat, is, because we want not so much the specific action of the irritant (say of the bacilli) as the properties of the serous membrane. It is now well known that any chronic inflammation of serous membranes may lead to primary tuberculosis. It is proved that we do have a primary tubercular synovitis or a primary tuberculous pericarditis; and that bacilli could be instrumental in its production is highly improbable.

In surface tuberculosis like that of the lung, the bacilli, in my opinion, also play only a secondary *r-le.*

Koch himself admits that it is not likely that the bacillus when inhaled by man could get a foothold in a normal lung. He says distinctly in his original articles that the lung must be predisposed for the reception and the action of the bacilli. Under such predisposition he understands and enumerates the following lesions: "*desquamation of the epithelial lining of the respirartory tract, stagnating exudates and secretion in the lung, adhesions, anomalies of respiration,*" etc. Now, here is a matter of mere interpretation of these lesions. Koch innocently calls them "predispositions," while every pathologist will designate some of these lesions as suggesting already-existing pulmonary phthisis. In fact, at the present standing of our knowledge of pulmonary phthisis we can have no desquamation of the vesicular epithelium without preceding tubercular infiltration.

Watson Cheyne is also considerate enough to say,[1] "* * * it seems to me that the lung must in addition be prepared for the reception of the bacillus, as may be the case if congestion or slight inflammation be present at the time of the inhalation of the organism."

That in inoculations into serous cavities the latter do not act merely in preventing the bacillus from escaping or being eliminated, and that the stagnating secretions in the lung do not act merely as a glue to retain the bacillus in order to allow the accomplishment of its effects, is, to my mind, proved by the following experiments of Bollinger. Bollinger,[2] in order to show that tuberculosis could not be transplanted by vaccination, made superficial *cutaneous* inoculation in rabbits with tuberculous materials with negative, and deep *subcutaneous* inoculations with the same material, followed by intense inflammation, with positive results. In both cases the wounds were covered by a layer of collodion to prevent the "elimination" of the bacillus.

Thus it appears that the bacilli by themselves have no effect upon the healthy organism or the normal tissues. A predisposed soil is the chief factor and is pre-eminently necessary for the production of tuberculosis; while, on the other hand, it is not proved at all that the bacillus is invariably necessary for the production of tuberculous lesions. Although the tubercle-bacillus is more liable to excite tuberculosis in an already inflamed and ill-nourished soil than all other simple irritants so far tested, it (the bacillus) might be readily substituted by other irritants.

The matter must unquestionably be tested further, but from the above evidence it is clear that a general fear of the bacillus tuberculosis as a contagion is unjustificable, and that the ordinary dust suspended in the air is to certain persons as dangerous as the bacillus.

5. *The specific lesions of a disease resulting from the inoculation of a specific parasite must also contain that parasite, and have the specific properties of reproducing the same disease when re-inoculated in other animals.*

Koch claims that the products obtained in animals by inoculation with bacilli are capable of producing tuberculosis when inoculated into a second animal, while the products obtained by inoculation with innocuous substances do not have this effect. The former proposition is true, but the latter, I hold, is not in accordance with facts. In my own experiments, to be detailed in my forthcoming report, tubercles produced by inoculation with innocuous material under antiseptic precautions were likewise capable of producing tubercles when inoculated into other animals, having thus the same action as the innocuous material primarily used.

I have also shown above (see bacillus chapter) that in secondary tuberculous products bacilli may be absent.

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[1] Loc. cit., p. 314.

[2] Zur Ætiologie der Tuberculose, *Prager Med. Wochenschrift*, Nos. 4 and 5, 1884.

The experiments of Martin,[1] which tend to show even the progressive virulence of products obtained from re-inoculation with tuberculous material in a series of animals, have been substantiated by no one.

Martin's assertion, also, that inoculations with products obtained by the introduction of innocuous substances never produce true tuberculosis, and that after a series of re-inoculations these products lose their power of acting even as local irritants, is, according to control experiments, positively wrong. On the other hand, views have been expressed, based upon experiments (I think also by Martin), that products obtained by inoculation with non-tuberculous substances, when re-inoculated may gradually become specific, and increase in virulence in producing tuberculosis.

6. *Finally, a given parasite and no other substance should, the conditions remaining the same, be capable of producing a parasitic disease.*

In my previous studies, judging from the literature alone, I was fully impressed with the idea that tuberculosis had a specific exciting cause, and that it could be induced by inoculation with tuberculous materials. Moreover, having made numerous inoculations with tuberculous matters, I convinced myself of this fact. Hence I accepted the view that tuberculosis is inoculable in certain animals.

But at the same time, after repeating under various modifications the well known control experiments, I found that, beyond doubt, even true tuberculosis could be induced by substances other than tubercular, and that failures to induce tuberculosis with tuberculous materials were in certain animals nearly as common as successful inoculations with innocuous substances.

To these experiments I will return in my forthcoming report.

It will be also necessary to first consider the evidence of those observers who, from the results of their own exhaustive experiments, negatived the exclusive or specific infectious properties of tuberculous materials. This negative evidence is by far more voluminous and strong than the admirers of the hypothesis of the contagiousness of tuberculosis suppose; excited admirers having especially arisen since the ingenious article of Koch appeared.

It is, however, remarkable that some of the writers on tuberculosis fail to understand that the pivot of the question of the ætiology of tuberculosis does not rest upon the fact alone whether or not the bacillus induces lesions analagous to tuberculosis, but preëminently upon the fact whether innocuous substances have or have not the same effects.

Thus, above all, the negative evidence must be carefully inquired into, not by relying upon the crippled and sometimes misrepresenting and meager quotations of some of the compiling writers, but by submitting the original communications of the authors and experimenters to a careful perusal.

Together with the accounts of the much-quoted experiments of investigators who succeeded in inducing tuberculosis in animals with tuberculous substances only, the reading and thorough examination of the records and results of experiments of the observers to be mentioned below are unavoidably necessary.

The following observers all refer to many or few experiments of their own, in which tuberculosis resulted from the inoculation with either innocuous substances or with specific matters other than tuberculous:

Lebert, *Allgem. Med. Central-Zeitung*, 1866.
Lebert and Wyss, *Virchow's Archiv*, vol. xl, 1867.
Empis, Report of the Paris Internat. Med. Congress, 1867.
Burdon Sanderson, *British Med. Journal*, 1868.
Wilson Fox, *British Med. Journal*, 1868.
Langhans, *Habilitationschrift*, Marburg, 1867.
Clark, *The Medical Times*, 1867.
Waldenburg, Die Tuberculose, etc., Berlin, 1869.
Papillon, Nicol, and Leveran, *Gaz. des Hop.*, 1871.
Bernhardt, *Deutsch. Arch. f. Klin. Med.*, 1869.
Gerlach, *Virchow's Archiv*, vol. li, 1870.
Foulis, Glasgow *Med. Journal*, 1875.
Perls, *Allgemeine Pathologie*, 1877.
Grohe, *Berliner Klin. Wochenschr*, No. 1, 1870.
Cohnheim and Fränkel, *Virchow's Archiv*, vol. xlv, 1869.
Knauff, *41te Versamml. Deutsch. Naturforscher*, Frankfort.
Ins. Arch. f. Experim. Pathologie, vol. v, 1876.
Wolff, *Virchow's Archiv*, vol. lxvii, 1867.
Ruppert, *Virchow's Archiv*, vol. lxxii, 1878.
Schottelius, *Virchow's Archiv*, vol. lxxiii, 1878; *ibid.*, xci, 1883.
Virchow, *Virchow's Archiv*, vol. lxxxii, 1880.
Stricker, Vorlesungen über Exp. Pathologie, Wien., 1879.
Martin, *Med. Centralblatt*, 1880, No. 42.
Wood and Formad, *National Board of Health Bulletin*, Supplement No. 7, 1880.
Robinson, Philadelphia *Med. Times*, 1881.
Weichselbaum, *Med. Centralblatt*, No. 19, 1882, and *Med. Jahrbücher*, 1883.
Balough, *Wiener Mediz. Blätter*, No. 49, 1882.
Wargunin, *Allg. Med. Centralblatt*, April 8, 1882.
Hänsell,[1] *Arch. f. Ophthalmologie*, vol. xxv.

Some of the observers enumerated did not consider the miliary eruptions obtained experimentally as true tubercles, but the majority did so, and, as I will show later, presented excellent and reliable experiments and sound reasoning in support of their views.

Shall all the above evidence go for naught merely because Koch has discovered a bacillus which is capable of inducing in animals lesions resembling tuberculosis?

I trust it will not. Koch has, so far, no authority to claim *exclusive* pathogenetic properties for his bacillus, as he made himself no satisfactory control experiments with substances other than tuberculous. The few control experiments he offers, viz.: that *sterilized* blood-serum (!), tuberculous material soaked in alcohol, and fresh scrofulous glands, or pus from

[1] *Journal d' Anatomie et de Physiologie*, April, 1881.

[1] Hänsell, who inoculated animals with gummous growths and syphilitic pus, obtained an exquisite miliary tuberculosis from the effect of these substances. In this connection may also be mentioned the following:

Damsch (*Centralbl. f. Med. Wissen.*, July 21, 1883), who obtained tubercular eruptions and nodes in the brain in rabbits through inoculation into the eye with the cultivated bacilli of leprosy. Similar in culation with leprous material led to a perfect miliary tuberculosis in rabbits id the hands of Kaposi, of Vienna, (*Wiener Med Presse*, Jan. 21, 1883)

Pfeiffer, Dontrelpont, Cornil and Babés, loc. cit., had the same experience with lupous material

Bodamer (Inaugural Thesis, Univ. of Penn., 1884,) had, as the result of inoculating with the pure cultivated actinomyces fungus, a striking general miliary tuberculosis in rabbits.

Inoculation with materials from glanders gives also rise to tubercles in the lungs, etc, not distinguishable under the microscope from the true miliary tuberculosis. But Löffler, who kindly demonstrated to me this fact in Koch's laboratory, and who also gave me a specimen demonstrating it, explained that the nodules in the lungs were not tubercle, because the bacilli found therein behave differently in staining.

tuberculous lesions, did not induce tuberculosis, prove little or nothing in favor of his bacillus.

Watson Cheyne, in his excellent report, displayed great care, diligence, and skill in his experiments and observations intended to corroborate Koch, but in making his control experiments he likewise was not very particular. So, in relation to inoculations with non-tuberculous substances he came to the conclusion that "not one of the twenty animals (inoculated with innocuous substances) became tuberculous"! But when the detailed account of Watson Cheyne's experiments is read over, it is amusing to learn that only nine out of the twenty-five supposed negative experiments were really known to be negative, because eleven of the rabbits experimented upon had been stolen before Cheyne had a chance to examine them, two rabbits died within a few days, or long before tubercle could develop, and in three rabbits the experimenter really records lesions that might have been tuberculous, in spite of the absence of bacilli in them, which latter circumstance, however, induced him to call the result a negative one.

These are instances of the way in which experimenters with preconceived and peculiar ideas upon a subject may unconsciously be misled in forming conclusions from their own experiments.

Further, it is interesting to note that in the "classical" experiments of Solomon,[1] Baumgarten,[2] Tappeiner,[3] etc., among other substances, the following materials were used extensively for control: "Caseous glands from scrofulous child;" "caseous material from various sources;" "muscle, testicle, and kidney from tuberculous guinea-pig;" "cheesy pus from man and animals, cheesy infarcts, caseous tumors," etc. All these substances, which are known usually to contain the bacillus, were inoculated while fresh into animals, and are recorded by the experimenters above stated as having failed to produce tuberculosis. This is surely not consistent with the doctrine of Koch.

Wherever inoculation with innocuous substances was followed by positive results, the over-zealous germ-theorists call it "*accidental tuberculosis.*" They say that at the time of former experiments the communicability of tubercle by a mediate contagion was not recognized, and as the precautions necessary for thorough disinfection of instruments, surroundings, etc., were probably not observed, the channels for the introduction of the *bacillus* were, in all previous experiments, left unguarded: hence, they argue, *it must have been* this ubiquitous bacillus which induced the tubercle.[4]

Further admitting, however, that innocuous substances may induce tubercle-like bodies, they claim that these bodies are not infectious, *i. e.*, they are *false* tubercles.

All these objections would be very plausible if they were based upon actual observations and facts; but, unfortunately for the bacillus theory, they are not; they are *mere unfounded assumptions.*

The fact established by experiments, that a true tuberculosis can be induced in animals by inoculation with innocuous and various other substances, and the significance of this fact, can surely not be overthrown by the imperfect evidence that the bacillus is more liable to do so, and still less by the mere unauthorized opinions of some of the writers.

Erroneous conclusions and views may easily be formed through the misconception of the significance of experiments.

At the meeting of the Pathological Society of London (Dec. 4, 1883, quoted from the *Lancet*, Dec. 8, 1883), Dr. Wilson Fox announced the following: "He was unwilling that his former observations[1] should still be quoted as opposed to the doctrines of Koch and those who had been more recently working at the subject; and therefore he had felt bound to come forward and make known the modification which his views had undergone. At the same time," Dr. Fox, however, added, "there was perhaps some danger of phthisiophobia or phthisiomania. During the past thirty years there had been many changes in the doctrine of phthisis, and hardly any doctrine has lasted more than five years."

But what had happened to induce Dr. Fox to lose faith in his own honest and excellent former work? So far as I could learn, it was the following: Dr. Fox had requested a Dr. Dawson Williams to repeat his former experiments. This bacillus-excited gentleman introduced *carefully* some "*putrid fluids*" and some *setons* into a few guinea-pigs and—did not obtain tuberculosis! Now, they think, it was at once evident that in all the former successful inoculations with non-tuberculous materials the mischievous bacillus of Koch must have gained entrance.

The reasoning of the London gentlemen appears to have been here as follows: *Putrid matter and setons do not induce tuberculosis; but the bacillus does. Hence the bacillus is the sole specific cause!*

But what is gained or proved for the bacillus theory if any one given substance, when inoculated into an animal, does not induce tuberculosis? Does, through this, the necessity of contagion at once arise? Surely not. If, for instance, as I will prove, finely-powdered, sterilized glass is capable of induc-

[1] Aftryk fra Nord. Med. Arkiv, vol. xi, 1879.
[2] Loc. cit.
[3] Loc. cit.
[4] In this connection the following incident is interesting, particularly on account of the high authority of the observer:
Some experiments were made under the supervision of Virchow (*Berlin. Klin Woch.*, 1880), principally with the view of testing whether the milk of animals affected with "pearl-disease" or bovine tuberculosis could reproduce the disease when fed to other animals. Virchow's own objection to experiments of this kind is that the various chronic inflammatory processes which occur spontaneously in animals are not sufficiently well known even to veterinary specialists. Further, in pigs, which he used in considerable numbers, scrofulous glands occur so frequently, from their alliance to man through their omnivorous habits, and their detection during life is a matter of such great difficulty, that results founded upon their presence must be accepted with great caution. The possibility of coincidence was also well illustrated by two cases in which several animals were found to be tuberculous after having taken the milk for some time from a cow which was diagnosticated during life as affected with bovine tuberculosis, but whose lungs were found at the autopsy filled with echinococcus cysts, and with no trace of tuberculosis.
The milk of another animal, which subsequently was found to be profusely affected by bovine tuberculosis, had, on the other hand, no effect when given as food to a number of healthy animals.
The only result that Virchow thinks is perhaps justified from these experiments is that more animals were found to be tuberculous among a certain number which had been fed upon the "pearly" milk, than among the same number which had been fed upon healthy milk.
(The above statements, first quoted by Dr. Whitney, of Boston, Professor Virchow corroborated in a conversation with me upon this subject last summer.—H. F.)

[1] Loc. cit.

ing a true tuberculosis, then it does not matter if putrid matter or setons failed to do it.

Cohnheim's acceptance of a theory of a specific poison for tuberculosis, which formed as its direct outgrowth, the basis of the bacillus theory, was also not justified from Cohnheim's own experiments. If he once succeeded[1] with innocuous substances in producing *peritoneal* tuberculosis, it is of no consequence that he subsequently[2] failed to induce an *iris tuberculosis*.

Negative results prove nothing under the above circumstances and in the presence of positive results. Most of the observations made in bacillus studies prove really nothing for the ætiology of tuberculosis, and some interpretations of the results of experiments in this direction are quite deficient, and not consistent with the principles of experimental pathology. Furthermore, some of the positive evidence must be excluded on account of the evident deficient knowledge of pathological anatomy on the part of some of the experimenters.

I am glad to be in the position to offer in my next communication a new series of observations and experiments on tuberculosis. These experiments, instituted under the auspices of Dr. Pepper, provost of the University of Pennsylvania, and executed by myself and assistants under all rules of scientific precautions and with full facilities for such work, plainly demonstrate that *the ætiology of tuberculosis does not rest with Koch's "parasitic" bacillus or any other "contagion."*

The experiments referred to will be given in full details in a special report now in progress and soon to be published with appropriate illustrations, etc.

I desire, however, to announce here that my experiments prove that finely powdered, sterilized glass, ultramarine blue, and other substances, are by themselves capable of producing tuberculosis in animals or tissues liable to this affection.

Further, I will offer proof that this effect (tuberculosis) ensues without the intercurrent action of any bacterium. And, finally, that in those instances where miliary, nodular eruptions have been induced by the tubercle-bacillus (or substances containing it), the action of the latter is a purely mechanical one, like that of simple irritants.

Further, these experiments show that the only advantage which the bacilli have over other finely divided matter and simple irritants is that the former multiply and thus intensify their action, while mechanical irritants have not this property, and hence must be introduced in larger quantities. The more finely divided the matter, the more prompt seems to be its effect, and I believe it is impossible to render any matter more finely divided than the bacilli.

Like others, I also often succeed in tracing the formation of the tubercle-nodules to the effects of the irritating particulate matter, if the latter were or could be made distinct enough to be seen within the nodes. When ultramarine blue was used for inoculation, granules of the latter substance were seen within the nodes when bacilli were used to that end, then bacilli could be detected within the nodes; but in either case these primary nodular eruptions, *if rapidly formed*, do not yet represent tuberculosis, as I will show.

It is generally conceived that a specific infectious disease, such as instanced by variola, syphilis, anthrax, etc., can have only one cause or one poison which will produce that disease and nothing else, and cannot be substituted by anything else.

For tuberculosis this is not true, for we have bacillary and non-bacillary forms of tuberculosis.

It is now no more a question of observation and experimentation, but rather one of interpretation and understanding of the results; for we have seen that the evidence from experiments and microscopical studies is nearly sufficient.

But there are misconceptions. If that only is tuberculosis where the bacillus of Koch is found, or that only which arises from the effects of this bacillus, then Koch's theory of the exclusive pathogenetic properties of the bacillus is correct, and under such a definition tuberculosis has only one cause. But if true tubercles exist and can be produced without the bacillus, which has been shown to be the fact, then Koch's theory cannot be accepted from a pathologico-anatomical standpoint; or else we are obliged to admit two or more kinds of tuberculosis,—one due to Koch's parasite, and others to a variety of causes.[1]

So far, however, we have no reason, from a pathologico-anatomical standpoint, to subdivide tuberculosis, and therefore I am of the opinion that Koch's view of the exclusive pathogenetic property of his tubercle-bacillus, is decidedly overdrawn, and even not warranted by facts. Neither the specific action of Koch's bacillus, nor the specific character of tubercle, nor the contagiousness of phthisis or of any form of tuberculosis, is proved.

Only after a complete harmony of the facts derived from pathologico-anatomical, experimental, and clinical studies in tuberculosis with those revealed by mycology, and not from either of these alone, can we arrive at a settlement of the question of the ætiology of tuberculosis.

Further details concerning this question will be incorporated in my report. This will embrace also studies into the onset, and distribution of tuberculous affections.

From the above analysis of the bacillus question, and of the ætiology of tuberculosis, the conclusions follow—

1. That the bacillus of Koch is a valuable diagnostic sign of tubercular disease.

2. That nothing is proved by its discovery for the ætiology of tuberculosis.

3. That the too ready acceptance of the bacillus doctrine is not justifiable, and is likely to do more harm than good.

4. That neither phthisis nor any form of tuberculosis is contagious.

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[1] Loc. cit.

[2] Sitzungsberichte d. Schlesischen Gesell., 1878.

[1] A suggestion to separate an "infective" form of phthisis from ordinary phthisis had been made by Dr. Reginald Thompson (London *Lancet*, No. 6, 1880, quoted by R. S. Smith, Bristol, *Medico-Chir. Journal*, No. 1, 1883). "In a series of 15,000 cases observed 15 cases (only one per one thousand) proved to be of an infective kind,—viz.: with history of contagion and absence of phthisical family history."

A CLINICAL NOTE ON BRONCHO-PNEUMONIA, WITH SPECIAL REFERENCE TO SURFACE REFRIGERATION FOR CONTROLLING HIGH TEMPERATURE.

BY L. S. MCMURTRY, A.M., M.D., OF DANVILLE, KY.

No pathological process is of more vital interest than that of fever, and no question in therapeutics has of late years elicited more discussion than the application of cold water to the surface of the body for the reduction of high temperature. Whatever may be the mechanism of fever from a physiological stand-point, it is a well-established clinical fact that very high temperature long continued is a most potent factor in the fatality of acute diseases. Although wholly a consequence of the pathological processes going on in the system, it is of itself a powerful menace to life. While quinine, salicylate of soda, and digitalis have been employed for their antipyretic influence, we can assume that the most powerful agent in this respect is the cold bath. The attention which this subject of necessity claims in every department of medical practice will render the observations here recorded of interest, and, may be, of value.

On Friday, December 22, 1883, I was called to see F. S., aged five years, and encountered the following symptoms and condition: The patient is a very robust boy, of healthy parentage and large for his years. On the previous day he experienced a chill, followed by fever, soreness of the chest and cough. At the time of my first visit I was informed that he had suffered with a cold for several days, and had grown rapidly worse since the chill of the preceding afternoon. The temperature was 104° F[1], pulse 120, and the respirations numbered 42 per minute, being superficial and labored. The cough was bronchial and somewhat suppressed. The normal pulmonary resonance was appreciably impaired over the left lung, and coarse *râles* were audible over its entire surface. The condition of the alimentary canal suggested a cathartic, which was at once prescribed.

On the following morning the physical signs were conspicuous and characteristic of broncho-pneumonia, having extended over both lungs. With each respiration the alæ of the nose were dilated and all the extraordinary muscles of respiration brought into action. The pulse was 140 per minute, temperature 104.5°, and respiration 48 per minute. The cathartic had acted during the night, and the patient took a small quantity of milk. I prescribed ten grains of quinine with one-fourth of a grain of pulverized digitalis, to be given at once, and directed that the patient receive a warm sponge-bath every hour. I saw the patient six hours later, and no material change was found in his condition. He complained of pain in the belly, and suffered from dyspnœa. I prescribed tinct. ipecacuanha comp.; (liquid Dover's powder, squibb,) in doses of four drops every three or four hours as indicated.

On Sunday morning, the third day in my care and the fourth of the disease, the condition was thoroughly alarming. Pulse 160; temp. 105.8° F.; respiration 60. The patient had brief snatches of uneasy sleep during the night, with increasing restlessness, followed by a tendency to somnolence. There was no cyanosis, or other evidence of carbonic-acid poisoning. I recognized the danger of the excessive and prolonged body-heat, and determined to resort to active measures for its rapid reduction. A large bathing tub containing sufficient water to immerse the entire body, was placed beside the bed; and after placing a cold cloth upon the head, he was gently lifted into the tub. The temperature of the water was 98° F., and cold water was added until the temperature of the bath was reduced to 60° F. At the end of eight minutes the thermometer showed a reduction of the patient's temperature to 102.5° F., when he was removed and placed in bed. The good influences of this method of treatment were evident from the moment it was instituted. As soon as placed in bed the patient fell into a tranquil sleep. An hour later he took a small quantity of milk. At the end of three hours the temperature had ascended to 105.2° F., and the bath was repeated. This method was continued throughout the day and night, administering the bath every two or three hours, as soon as the thermometer indicated a temperature of 103.5° F. The thermometric observations were made every hour, and I remained almost constantly with the patient, giving personal attention to the technique of the treatment.

At noon on the following day (Monday) the baths were discontinued, the patient having received eleven cold baths in twenty-nine hours. At this time the temperature was 102.5°; pulse 138; respiration 48. The physical signs gave evidence of resolution, and the patient took milk in small quantities at intervals. No material change was noted during the afternoon of this day, and the following day (Tuesday), the temperature, pulse and respiration being, with slight variations, as just indicated, and we were anxiously, but confidently, awaiting the trustworthy evidences of convalescence.

On Wednesday morning brain symptoms appeared, and put aside for the time all our cherished expectations. Ideation was confused and illusions occurred. Patient complained of intense headache, the eyes were suffused, and coördinated muscular movements were performed with difficulty. At noon the temperature was 104.5°. The rubber-coil cap was applied to the head. At this time very cold weather was prevailing, and water reduced to the freezing point by exposure to the atmosphere after being drawn from the cistern, was applied. From a bucket elevated above the head of the bed, a continuous current was passed through the rubber coil. In the evening of this day the symptoms were those of depression, with somnolence. Five grains of calomel were administered at 6 P. M.

Thursday morning the symptoms had appreciably improved. Patient had two copious bilious stools during the night. The temperature came down to 102.2°, and the cold applications to the head were

[1] The thermometric obsevations in this case were made with a Hicks' thermometer, tested and corrected at the Kew laboratory at Richmond, Surrey.

discontinued. Ideation was clearer; patient had a severe paroxysm of coughing; takes milk at intervals. Respiration 34; pulse 112. Very little change was manifest in the symptoms during the remainder of this day. Patient slept at intervals, and took nourishment in small quantities.

Friday morning the improvement was marked. Temp. 99.5; pulse 102; respiration 28; mind clear; expression good. The physical signs were those of progressive resolution. He slept several hours during the forenoon of this day, and asked for food on awakening. From this day, just one week from date of my first visit, convalescence was established, and continued without further interruption.

In arranging these notes and recalling the phases of this severe illness, I cannot but feel how much the successful issue is due to the unremitting attentions of the intelligent parents of the patient. In the application of the heroic methods of treatment I received throughout their cordial aid and coöperation.

MEDICAL PROGRESS.

THERAPEUTICS.

ON THE USE OF IODINE AND OF THE ERGOTINE OF IRON IN GOITRE, AND PARTICULARLY ON ITS PARENCHYMATOUS INJECTION.—Dr. Bawvens has a long and interesting article on the subject in the *Bulletin de l'Académie Royal de Médicine de Belgique*, in which he gives the following useful indications for the treatment by these drugs:

INDICATIONS.

TINCTURE OF IODINE.	ERGOTINE.
(*a*) Cystic goitre, successful.	The same.
(*b*) Soft, diffused recent goitre, sometimes successful	Success certain.
(*c*) Vascular goitre, dangerous and useless.	Success certain.
(*d*) Exophthalmic goitre, dangerous.	Its physiological action ensures success.
(*e*) Degenerated goitre, harmful.	It has been successful even in an ossified goitre.
(*f*) Fibrous goitre, useless.	It may succeed.
(*g*) Cancerous Goitre, useless.	Useless.

DANGERS.

(*a*) The inflammatory swelling is always intense; the symptoms of compression of the trachea, of the vessels, and of the nerves of the neck are very marked, so as to threaten a cerebral congestion and sometimes asphyxia. The pain, produced by the injection, is very severe.	The tumefaction is nothing when one considers the action of contracting, which is but little appreciable in the simple cystic goitre, but sometimes intense with a degenerated goitre. In the case of an abscess, by the use of the bistoury or trocar, all the symptoms of compression are made to disappear. The pain of the injection is almost nothing.
(*b*) Several cases of death have been recorded: Schwalbe, Sücke, Hicguet, etc.	It is not at all dangerous.

READINESS OF APPLICATION.

To have a sufficient effect, from 1 to 5 and 6 grammes should be injected at a time, which requires either a special instrument or the pain of five injections. In order that the canula and mountings of the syringe shall not be attacked by the iodine they must be gilded. To lessen the pain of the injection, it is often necessary to have recourse to ether in the atomizer. The result of the injections is often not appreciable until after two to five months of treatment, and the injections cannot be repeated at will.	Pravaz' syringe is all that is necessary, and the injections are given as required, leaving ordinarily an interval of three to four days between each.

RESULTS.

This has been successful in certain cases. Levéque has noted 32 out of 48, but on the other hand, there have been a great many failures. Lebrecht records 322 cases of thyrodectomy, in all of which iodine had failed.	In the eight cases in which it has been tried, each one has proved a success.

The preparation of ergotine (d'Iron) referred to is compared with that of Boujean as being double the strength of the latter, and instead of being syrupy and viscid, it is transparent, clear, and can be injected pure.

MEDICINE.

THE USE OF VERATRINE IN GENERAL OR LOCALIZED PRURITUS.—Dr. J. Cheron (*Jour. des maladies des femmes; Gaz. des Hopitaux*) treats the pruritus, which is so difficult to relieve, and which appears at the menopause, with an eruption of prurigo, urticaria, eczema, herpes, or without any such eruption, by the use of a pomade composed of:

Veratrine.....15 centigrammes.
Lard.....30 grammes,

of which he applies a piece the size of a small pea, morning and evening, a a soothing ointment, when the pruritus is localized in the groins, armpits, abdominal walls, etc.

But when the pruritus is more general, the internal use of veratrine is preferable, in the following doses:

Veratrine.....2 centigrammes.
Pulv..... .....glycyrrhizæ, 9 s.

Divide into 40 pills. Take 2 to 6 pills a day, one-half hour before eating, or three hours afterwards, never taking but one pill at a time, and increasing by one each day, until the maximum dose (3 milligrammes) is reached.

A CASE OF SUDDEN SPASMODIC ICTERUS.—M. Potain (*Gaz. des Hopitaux*) refers to several stories related in reference to the sudden appearance of icterus, as in the case of the two duellists, where on crossing their swords, one became suddenly so yellow that his

adversary dropped his sword in amazement, the case of a patient of Bouillaud, who, feeling very well, got up in the morning and proceeded to shave himself, when a letter was handed to him containing very bad news, and when he turned to finish his shaving, he found himself turned yellow; and the case of the woman whose husband was taken by the Commune, and about to be shot before her eyes, she turned yellow at the moment of taking aim by the detail of soldiers.

He then relates the case of a very nervous and irascible woman, in good health, who the day before her entrance into the hospital, about 10 A. M., became violently angry. Some hours later she was surprised to learn from her neighbors that she was jaundiced, and came to the hospital to be treated for the affection, which was readily relieved. The only admissible explanation of this phenomenon seems to be the influence of the abdominal sympathetic system, in its relations with the emotional centers, resulting in a sudden dilatation of the vessels of the liver, the equilibrium is disturbed and a partial vacuum created, which causes the biliary fluid to transude from the hepatic cells into the blood-vessels; whereas, in the normal state, the contrary is the case.

ON THE NEURALGIAS OF DIABETES.—Dr. Comillon (*Revue de Medicine*) gives us an extended article on this subject. In the literature of the subject he finds Griesinger in 1859, indicating the frequency of sciatica in glycosuria, who was followed by Braun in 1868, and a number of others in succession; but Worms, in 1881, was the first to establish the close relation between neuralgia and glycosuria, and to give a certain physiognomy to the three characters of the acuteness, the tenacity and the symmetry of the neuralgia. In recording his observations, he established the following four propositions:

1. There exists a special form of neuralgia peculiar to diabetes, which presents the character of being located symmetrically in the same nerve branches.

2. Up to the present time, this symmetric neuralgia has been observed in the inferior dental nerves, and in the sciatic nerves.

3. The neuralgia of diabetes is more painful than that of all others.

4. It does not yield to the ordinary treatment of neuralgia, (quinine, morphia, the bromides,) but is aggravated and extended in accordance with the degree of glycosuria.

In support of these views of Worms, Dr. Comillon quotes Drasche, and others who reach the same conclusions, and he has gathered from these sources and from his own practice twenty-two cases of diabetic neuralgia upon which to base his conclusions, as follows:

Symptoms—The neuralgia is not generally an initial symptom, but occurs only after there is a notable degree of weakness, emaciation and polydipsia. Its onset is sudden and unexpected, occurring on awakening in the morning, as a continuous, piercing, lancinating or fulminating pain, and giving at intervals paroxysms which surpass in intensity and duration most violent forms of neuralgia. These paroxysms occur three or four times a day, a slight movement or emotion being sufficient to produce them. However severe they may be in the daytime, they are worse at night. The pain is not always confined to the course of the nerves; it extends sometimes to the muscles and to the bone. Digital pressure along the course of the nerve exaggerates the pain; more extended and firm pressure quiets it. Movements increase it, and it is the same with rapid changes of temperature. With the most severe attacks there is no fever, the skin is cool, and the pulse normal. One of the most prominent and constant symptoms is the symmetry of the neuralgia, this occurs rarely at the onset, most frequently one member is attacked at first, to be followed in a few days by its fellow; with the latter the same nerve branches are affected, and if in the first the pains do not pass a certain zone, not occupying the whole extent of the nerve, they preserve the same course in the second. Exceptionally the pain is equaly in intensity on both sides, but most frequently it predominates in one or the other.

In one of Drasche's cases, the affection took on almost from the first a bi-hemiplegic ? character. At first it was located in the right hip, extending in a few days to the arm, forearm and fingers of the same side, and finally the inferior and superior extremities of the left side became involved. The relations of the degree of glycosuria is not definite; in most cases, it is only when the glycosuria is very abundant that the pain is present, but in some cases the neuralgia has appeared when the glycosuria is at its minimum.

Progress and Prognosis.—In the most favorable cases the neuralgia after resisting the use of morphia, yielded to progressive doses of salicylate of soda—in other cases the ordinary anti-diabetic treatment (diet, alkaline mineral waters) caused a prompt cessation of the pain. Relief was coincident with a diminution of the sugar, but when the patient committed some irregularity of diet, or from other exciting causes, the neuralgia returned. When the diabetic character of the neuralgia is recognized early the prognosis is not grave. By submitting the patient to a rigorous diet it yields after a time. But if it remains unrecognized for a long time, there follow alterations of the muscular tissue, and atrophy, and paralysis of sensibility of the skin; lesions which are difficult to relieve.

Diagnosis.—All neuralgias occurring in the course of diabetes are not necessarily of a glycogenic origin. But when a diabetic complains of a sharp, fixed pain along the course of a nèrve it is pretty sure to be of this nature. What has already been said of its character would, of course go far to establish the diagnosis.

Pathogenesis.—In considering this, Dr. Comillon, after reviewing the ideas of others on the subject, calls attention to the fact that diabetes has been looked upon as a manifestation of the uric acid diathesis, and he is convinced that glycosuria affects specially those persons who have had serious attacks of rheumatism or gout, bringing forward a number of considerations to sustain him in this opinion, therefore he gives uricæmia a prominent place of at least as much importance as hyperglycæmia in the pro-

duction of the neuralgia of diabetes. The last question which he considers is as to the peripheric or medullary lesion which causes this condition. The absence of hyperæmia, of vesicular eruptions, pemphigus and of paralysis would seem to exclude the idea of a neuritis. On the other hand so tenacious a neuralgia, affecting homologous nerves, and without known external causes, would seem to indicate a transitory lesion, unconnected with the anatomical elements of the medullary centers. All the symptoms point to a transitory lesion, whether this be located in the meninges, the gray or white substance is but a matter of speculrtion as no autopsy has yet been made.

A Case of Syphilis Cured by Means of an Intercurrent Typhoid Fever.—M. Defize, in the *Arehives Médicaies Belges*, relates the curious history of a patient, who in June, 1882, was affected by multiple chancres, which were soon followed by the symptoms of confirmed syphilis; pronounced adenitis in the groin and neck; general syphilitic papules, particularly one on the face; alopecia, marked emaciation, etc. Very little mercury had been given, and the specific treatment had been very incomplete. This was the condition of things when, in January, 1883, he was taken down with the ataxo-dynamic form of typhoid fever; all the symptoms were present with the exception of the lenticular spots, which were masked by the syphilitic eruption. The treatment was limited to cold water baths, tonics and diet. The duration of the fever was a month and a half. Once relieved of the typhoid fever, there remained no traces of the syphilitic affection. He had a good appetite, increased in flesh and strength. The writer refers to two other cases treated by his colleagues, which resulted as happily. He quotes Kaposi as recognizing in syphilitic cases a suspension, but not cure, of the syphilis, during the presence of the exanthematous fevers; here he claims a cure.

OBSTETRICS AND GYNÆCOLOGY.

On the Condition of the Gums in Pregnant Women.—M. Pinard treated of this subject in 1877, and now Dr. Henry Didsbury has made it the subject of his insurgural thesis, which is discussed in the *Revue Medico-Chirurgicale des Maladies des Femmes*. This disturbance of the gums consists of a swelling and softening, beginning about the second month of pregnancy. Dr. Didsbury describes three grades of the affection; in the third stage the inflammation is so marked as to give a violet red color to the gums they are puffed out, and the interdentary spaces stand out in marked relief. The tartar and the epithelial debris collects about the necks of the teeth, and the inflammation may extend to the alveolar periosteum, when the teeth become denuded and finally come out, being themselves in a perfectly healthy condition.

This gingiritis is located especially on the anterior portion of the maxillaries; it is rare to see it go beyond the canines, and the convex surface of the maxillaries is the only part affected. The other symptoms which present themselves are pain and local hæmorrhages.

The ætiology of this curious affection must remain as hypothetical. The treatment should be energetic. The tartar must be removed, and the condition met by astringents, chlorate of potash, etc.. and in severe cases by the tincture of iodine, chromic and a mixture of hydrate of chloral, and astringents.

On the Relations of Hepatic Colic to Pregnancy and Labor.—Dr. Cyr has devoted some attention to this subject, his remarks upon which are considered at length in the *Rev. Med. Chir. des Maladies des Femmes*. He reports 51 observations. In 11 of these the first attack took place during pregnancy, in 4 cases it followed a miscarriage, and in 36 it occurred after labor. It seems to be associated with certain factors, as: suppressed lactation, a defect or diminution of activity. a want of proper regime, and hereditary antecedents.

The last factor, that heredity was found to influence 4 cases as an hepatic heredity, 1 case as an arthritic, and in 5 cases there were previous or concurrent arthritic symptoms. In fact, pregnancy alone was the cause of the great mass of cases. How shall this action of pregnancy be explained? In a general way it is admitted that biliary calculi have a particular tendency to be formed, from some modification in the composition of the bile, either from the sluggishness of its circulation, or from some obstacle to its passage through the biliary ducts.

Pregnancy exerts an influence upon the liver which results at times in a more or less marked fatty degeneration, but it is not satisfactorily proven that this condition is favorable to the formation of calculi.

The direct or indirect compression of the liver during the last months of pregnancy is incontestable, and as a consequence a slowing of the circulation of the bile would ensue, with a tendency to the separation of the elements in that fluid, and the precipitation of cholesterine. This question of the connection between pregnancy and hepatic colic is interesting from a diagnostic point of view, that one may be prepared for its occurrence during pregnancy and soon after confinement, so as not to be misled by an erroneous interpretation of the symptoms, with its consequences.

The prognosis in pregnancy, except in cases of jaundice, is not affected by the presence of hepatic colic. The physician should insist upon certain hygienic precautions, such as relate to exercise, to alimentation, and to other means, the prophylactic value of which are recognized.

SURGERY.

An Instrument for Temporarily Closing Either Ureter.—Silvermann (*Berlin Klin. Wochenschr.*) figures and describes a new instrument by which either ureter can be closed long enough to al-

low of unmixed urine from either kidney to be collected for examination.

The instrument consists of a metallic double catheter, with quick curve, and a window 3½ cm.x 5 mm., near its point. The window can be closed by a shutter moved by a stilet. Within the catheter there is contained a firm elastic catheter, which terminates in a small expansible gutta percha balloon or tampon. When collapsed, this tampon is contained within the point of the catheter.

The instrument is passed into the bladder till its beak impinges upon the posterior wall in the middle line, guided by a finger in the vagina or rectum (in men). The window is then opened, and the tampon made to expand by pouring mercury into it through the elastic catheter. By the introduction of 20 c,cm. of mercury, which weigh about 270 grms., the tampon can be filled up to the size of a goose's egg, and, guided by the finger to either side of the middle line, will by its weight effectually prevent any outflow of urine from the ureter upon that side. The bladder can be emptied and washed out through the other channel of the metallic canula, and urine from the free ureter allowed to collect for from fifteen to twenty minutes, in which time quite enough for satisfactory examination can be obtained.

Silvermann had used it twenty-two times in women, and five times in men, and did not find its use attended with discomfort to the patient or followed by any evil effects.—*Centralbt F. Chir., Glasgow Med. Jour.*

OTOLOGY.

TREATMENT OF CONSTRICTIONS OF THE EUSTACHIAN TUBE BY ELECTROLYSIS.—M. Mercié has presented to the Paris Académie de Médecine a report on the experiments of Dr. Garrigue Dézarennes in the employment of this mode of treatment. He introduces into the rubber sound, while in position, a bougie composed of a bundle of very fine silver threads, which are curved upon themselves at the extremity, so as not to wound the walls of the tube. When the metallic thread reaches the back of the sound, it marks a point on the external portion, which indicates the degree of penetration, so that the exact location of the constriction is thus determined.

The sound being kept in place and the thread passed in, the moment it passes with difficulty it is forced no further, and in the external auditory canal a small silver olive-shaped conductor is passed to the immediate neighborhood of the tympanum. By connecting the shaft of the olive-shaped conductor with the positive pole, and the metallic thread which had entered the sound with the negative pole, a weak current (two or three elements of Chardin) is allowed to pass. The operation does not take more than a couple of minutes, and after its use the bougie, which had been tightly squeezed by the walls of the sound, passes readily. These results promise in electrolysis a great benefit, in cases of constriction of the Eustachian tube.—*Gaz. des Hopitaux.*

OPHTHALMOLOGY.

ON THE USES AND DOSE OF CYANURET OF GOLD AND OF POTASSIUM IN THE TREATMENT OF ATAXIC PAPILLARY ATROPHY.—M. Galezowski having reported (*Gazette des Hopitaux*) a case of atrophy of the optic papillæ which was consecutive to a locomoter ataxia of syphilitic origin, in which the ataxic affection was checked and vision greatly relieved by the use of the cyanuret of gold and potassium in hypodermic injections, the *Gazette* gives the formula and doses:

M. Galezowski employs the cyanuret of gold and potassium in hypodermic injections in doses of 5 milligrammes to commence with, then 10 milligrammes, every day or every other day. His evolution is as follows: Cyanuret of gold and of potassium, 20 centigrammes; aqua dist. 10 grammes. A fresh solution is more active and less irritating than preparations made in advance, and used sometime after. The injections should be inserted by preference in the back, along the spine, and at considerable distances from each other. They should penetrate deeply into the cellular tissue. Simply inserted in the thickness of the skin, they produce eschars, abscess, and phlegmonous inflammation of the skin. These accidents are easily prevented by taking the proper precautions.

NEW INVENTIONS.

NEW SURFACE THERMOMETERS.—M. Constantin Paul (*La France Medical*) has furnished three models of thermometers to take the local superficial temperature; one is vertical, one is circular, and one is horizontal. For their proper application two things are requisite; adhesion to the skin, and isolation from the surrounding atmosphere. This is accomplished by means of rubber arranged like a cupping glass. They can be applied anywhere to the surface where there is no hair, the air is exhausted from the rubber cup, it adheres to the skin, to which the thermometer bulb is brought in contact, and it is left at will, so that when removed the maximum remains as a permanent register, as in other clinical thermometers. The vertical, horizontal and circular positions given to the tubes are simply for ease of application in different situations.

AMONGST those upon whom the University of Aberdeen has just conferred the degree of LL.D., are Archibald Forbes, the famous and intrepid war-correspondent; Dr. George King, Professor of Botany, and Director of the Botanic Gardens, Calcutta; and Professor Lapworth, of Mason's College, Birmingham.—*British Med. Jour.*

DELEGATES FROM THE DISTRICT COLUMBIA.—Of the list of delegates to represent the Medical Association of the District of Columbia, as published in our last issue, Drs. Joseph Borrows and W. G. Palmer have declined, and Drs. W. W. Godding and J. F. Hartigan have been elected in their place..

THE

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THE EDITOR of this JOURNAL would be glad to receive any items of general interest in regard to local events, or matters that it is desirable to call to the attention of the profession. Letters written for publication or containing items of information, should be accompanied by the writer's full name and address, although not necessarily to be published. All communications in regard to editorial work should be addressed to the Editor.

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SATURDAY, APRIL 26, 1884.

WHAT ARE THE CONDITIONS FOR RETAINING PERMANENT MEMBERSHIP IN THE AMERICAN MEDICAL ASSOCIATION?—This question was suggested by a perusal of the following letter:

"*Dear Sir:*—I have been a permanent member of the American Medical Association more than a quarter of a century. I signed the *regulations* when I became permanent member." If I attend the May meeting in Washington, must I sign again to be allowed to have my tickets? I have paid all my dues up to date. I claim that I am a permanent member, and will be until expelled. I believe in the new Code of Ethics of the State of New York, and cannot *sign again*. Please answer, that I may know whether *permanent* member, means *permanent* for one year, or until you are proven guilty of some óvert act and expelled from the same. Yours respectfully."

It is evident that the writer of the foregoing letter regards the payment of the annual membership dues, as the only condition necessary to be complied with, in order to retain indefinitely the position and privileges of permanent membership in the national Association. The same view is undoubtedly entertained by many others. Indeed, no other one thing has surprised us so much as the degree of ignorance which exists among members of the Association concerning many of the plainest and most important provisions of its Constitution and By-laws. For instance, the clause of the constitution or plan of organization relating to permanent members, reads as follows:

"The *Permanent Members* shall consist of all those who have served in the capacity of delegates, and of such other members as may receive the appointment by unanimous vote, and shall *continue* such so long as they remain in good standing in the body from which they were sent as delegates, and *comply* with the *requirements* of the *By-laws* of the *Association*. Permanent members shall at all times be entitled to attend the meetings, and participate in the affairs of the Association, *so long as they shall continue to conform to its regulations.*

The last clause of the fifth By-law says: "Any permanent member who shall fail to pay his annual dues for three successive years, unless absent from the country, shall be dropped from the roll of permanent members, after having been notified by the Secretary of the forfeiture of his membership."

The reader will see from these provisions of the Constitution and By-laws, that the continuance of permanent membership is made to depend upon the three following conditions: 1. Remaining in good standing in the body or society from which he was originally sent as delegate. 2. So long as he shall comply with the requirements of the By-laws of the Association. 3. So long as he shall pay the annual membership dues. Failing in any one of these three conditions, he forfeits his permanent membership, while the right to attend the annual meeting in Washington or elsewhere, is made to depend directly upon the willingness of the member to *continue to conform* to the *regulations* of the Association. If, in accordance with the last paragraph of Section second of the plan of organization, the Association, through its registration officers, require every member to sign a card or certificate in which is a clause making the signer acknowledge obedience to the Constitution, by-laws and Code of Ethics of the Association before he can be registered and receive his card of admission to the meetings, and any permanent member or delegate refuses to sign such card, he by such refusal to "*conform to the regulation*," simply forfeits his rights as a member; not by trial and expulsion, but by a deliberate and voluntary violation of the condition on which the enjoyment of the rights is made to depend. The duration of permanent membership, therefore, must depend entirely upon the choice of each member for himself. He can make it continue as long as he lives, by simply *complying* with the *conditions* specified in the Constitution and By-laws, as indicated above; or he can terminate it in one year, or one day, by refusing such compliance with either one or all of said conditions.

DR. FORMAD'S ARTICLE.—When, many weeks since, we received and published in the JOURNAL the first part of Dr. Formad's paper on the Bacillus of Tu-

bercle, we expected to receive the remaining part simultaneously with its appearance elsewhere.

For some reason, however, the copy did not come to hand until a few days since. Yet such is the intrinsic importance of the subject, and the high value of the paper, that we have felt justified in completing its publication in the present number.

CLOSE OF THE PROGRAMME OF WORK FOR THE MEETING OF THE ASSOCIATION.—The Chairman of the Committee of Arrangements at Washington, informs us that the *Official Programme* giving the titles to papers, etc., and their assignment to Sections, was to be positively closed on the 24th inst.; it having been kept open nearly a month longer than the By-laws require.

SOCIETY PROCEEDINGS.

CHICAGO SOCIETY OF OPHTHALMOLOGY AND OTOLOGY.

The society met Feb. 13, 1884. After transacting the usual routine business the following paper was read by Dr. E. L. Holmes on the Prognosis of Choroidal Sarcoma and Life Insurance:

"On Dec. 3, 1874, I extirpated the right eye of Mr. ——, 47 years of age, who came to me with the following symptoms: the pupil was closed, the cornea slightly vascular, the vessels of the conjunctiva much congested and tortuous; the tension of the globe was greatly increased.

The eye had been blind twelve years, had suffered from periodic pain two years, and from constant and severe pain eight months.

I expressed the opinion that the affection was glaucoma, following iritis or choroidal tumor. The case reported in Knapp's Archives, Vol. 6, proved to be a glio-sarcoma of the choroid, with small round cells.

Within a few days I have been requested by a life insurance company to express an opinion regarding the nature of this tumor, as the patient had applied for a policy.

The prognosis in cases of choroidal sarcoma has been of great interest to me, since my individual experience has been at variance with the opinions generally expressed on the subject.

I have been taught to believe that the average duration of life after the removal of the globe is only four years. In this case more than nine years have elapsed, with no symptoms of local nor of remote recurrence.

I occasionally meet a gentleman in most excellent health, one of whose eyes I extirpated with melanotic sarcoma fourteen years ago. I have enucleated the globe twenty-six times for this form of tumor, and have always urged the patient to inform me of any evidence of future local manifestations or of any impairment of the general health.

In only one case have I ever received a favorable or unfavorable report. In this case there was a speedy return of melanotic growths in the orbit, in the liver and different portions of the integument.

On the other hand, I have received subsequent reports in nearly all cases of glioma, for which I have removed the globe twenty-four times, and in which the glioma re-appeared in the orbit within a few months.

My own experience would not lead me to regard sarcoma of the choroid as a very malignant disease. Under all the circumstances, I am surprised that I have been able to obtain the subsequent history of so few of my patients, the more so in view of my experience with glioma.

The difference of opinion expressed by authors as to the ratio of fatality arises, I suspect, from the difficulty in following the subsequent history.

In reference to life insurance I can only say, I believe the application of a patient who has been affected by sarcoma could not be favorably entertained by the medical examiner."

Dr. Boerne Bettman mentioned two cases of eneucleation of one eye for sarcoma and glioma. In neither of these individuals had a return of the disease been noticed.

Fully six years have elapsed since the sarcoma was removed, and three years since the extirpation of the retinal growth.

Dr. W. T. Montgomery related an instance of reappearance of the tumor and death of the patient a year after enucleation of the eye. The sarcoma was in an advanced stage, and had broken through the globe.

Dr. Bishop then addressed the society on Acute Inflammation of the Middle Ear, its Causes and Treatment.

The causes of this disease may be arranged under the three following heads: I, natural causes; II, traumatic causes; III, predisposing causes.

Under the first category cold winds and drafts occupy a prominent position. Sudden and extreme changes in the temperature and humidity of the air are prolific causes of this disease. Water is a source of great evil. Swimmers and sailors are frequently subject to inflammatory attacks of the ears. The water may enter the middle ear through the Eustachian tube from a douche, and set up a violent irritation.

II. The second class of causes includes fracture of the temporal bone, contusions of the cranium and sudden forcible condensation of air in the external auditory canal from any cause, such as explosions of fire-arms, falls upon the ear. The harmful practice indulged in by parents and teachers of boxing and cuffing the ears is to be condemned. Several cases were cited of destructive inflammation and loss of hearing caused by this barbarous treatment. Picking and cleansing the ears with pins, toothpicks, pencils, introducion of beans, pebbles, insects, frequently give rise to much trouble.

III. The predisposing causes are the most numerous. All those diseases, conditions and practices which debilitate. Whatever causes congestion of the middle ear predisposes to an inflammation, such as quinine, excessive use of alcoholic beverages, strong coffee, tea, and much tobacco smoking, scarlet fever, diphtheria, and naso-pharyngeal catarrh.

During the first stage of the disease, the treatment should be palliative, constant application of cold, local depletion. Three or four leeches placed in front of the tragus will afford speedy relief. The hypodermic injection of morphine is preferable to instillation of Magendie's solution in the ear. The solution cools rapidly, and the change of temperature is apt to increase the inflammation. Tobacco smoke blown into the external ear, through a pellet of cotton, is a very efficient remedy. General refrigerant remedies must be employed. Laxatives, sudorifics, diuretics, should be prescribed on general principles. Nutritious but non-stimulating diet should be enjoined. A simple method to evacuate the middle ear is the following one. It is the reverse of the Valsalvian method of inflation. The patient is instructed to incline the head forwards, compress both nostrils with the thumb and finger, and close the mouth. Then he is directed to draw in the breath, as it were, thus producing by the inspiration a partial vacuum in the nasal cavities and pharynx. Immediately the fluid secretions in the tympanum are forced into the throat and expectorated. If there is great swelling of the walls of the Eustachian tube, the method may not at first succeed, but is easily practiced when the tumefaction is reduced. Patients should be directed to swallow after trying this experiment; the air re-enters the middle ear, and equilibrium of pressure is restored. Catheterization is recommended when this method fails. When rupture of the M. T. is inevitable, paracentesis is resorted to. During the second stage cleanliness should be strictly observed. When pain has ceased, the dry method of treatment with pulverized boracic acid or iodoform is introduced.

The carbolic acid treatment has not been satisfactory in the doctor's hands. A five per cent. solution is neeessary to destroybacteria; he is fearful that a solution of this strength might cause suppuration. One part of bromine to 1,500 parts of water, and one part of corrosive sublimate to 20,500 of water will destroy the bacteria in ten minutes. When the trouble shows a tendency to become chronic, the following formula is prescribed:

℞. Iodoform.....ʒi.
Zinc. Sulph.....gr. ii.
Aq. Dist.....ʒi.
M.

Dr. Gradle opened the discussion by stating that micro-rganisms are one of the causes of suppuration of the middle ear. Experiments have proven that progressive suppuration is always due to micro-organisms. As long as the discharge is profuse, bacteria are always present, they diminish and no longer increase in the the discharge as the inflammation subsides. Such micrococci have been found in abscesses, and are of considerable significance. His experience in the treatment of this disease has been limited entirely to the antiseptic method. He no longer uses boracic acid, having found a more efficient substitute in the combination of one per cent. of corrosive sublimate and bismuth. It checks suppuration more rapidly, and destroys the factor after the first application. A five per cent. solution of carbolic acid will not, according to the doctor's opinion, produce suppuration.

Dr. Starkey has seen good results follow the use of peroxide of hydrogen.

Dr. Holmes disapproved of paracentesis of the M. T. in acute suppuration of the middle ear. He thought the trouble would only be aggravated by such interference.

Dr. Montgomery stated that Politzer has abandoned operative treatment in acute suppuration, but practices the method in catarrhal inflammations where there is a serous secretion.

Dr. Hotz expressed doubt as to the possibility of performing the negative Valsalvian method in this disease, during the stage of inflammation, owing to the swollen condition of the mucous membrane lining the Eustachian tube. He could not satisfy himself that leeches put on the mastoid process were not as efficacious as when placed on the tragus. They relieve pain, and should be prescribed in every case. He is fully satisfied with the action of boracic acid, and does not approve of bismuth. This powder does not dissolve, and by accumulating in the ear might act as an irritant.

An interesting case of foreign body imbedded in the fundus oculi was then shown by Dr. Hotz.

The patient was injured six months ago, a piece of a steel punch penetrated the eye after passing through the upper lid.

Some time afterward he noticed a dimness of vision, followed by almost complete loss of sight. Externally no scar or sign of inflammation is visible; the pupil is somewhat dilated. The vitreous in the upper anterior part shows some cobweb-like opacities. In the upper and inner part of the fundus, close to the papilla, is seen a black, slender and round body, apparently about ¼ inch long, one end is fastened in the tissues of the eye, the other end of the splinter projects into the vitreous, reaching close up to the lens. The piece of steel is firmly fixed, it does not change its position during movements of the eye. The papilla, in fact, entire fundus, is blurred, owing to the neuro-retinitis.

BOERNE BETTMAN, M.D., Secretary.

RESORCIN.—Le Blond and Fissiâux recommend resorcin for chancroids in woman. It acts more quickly than iodoform, and has not such a disagreeable odor; it may be used either in powder or in 25 per cent. solution. Poisonous effects have never been observed.

April 10. The opacities in the vitreous have entirely disappeared, the fundus is much clearer, and vision has decidedly improved.

STATE MEDICINE.

MICHIGAN STATE BOARD OF HEALTH.

(Reported for the JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION.)

The annual meeting of the State Board of Health was held at its office in Lansing, April 8, 1884.

The members present were President Avery, Drs. Lyster, Hazlewood, Vaughan, Tyler, and Secretary Baker.

Reports of the sanitary condition of the Wayne county poorhouse and asylum, and of the Barry county jail were made by the committees who examined these institutions; and these reports were ordered printed.

Dr. Vaughan read a paper prepared by Dr. C. P. Pengra, which gave results of investigations relative to the purification of water by freezing. As a result of a series of elaborate experiments conducted in the University laboratory, Dr. Pengra found that, contrary to the general impression, freezing does not render water pure. Ordinarily he found less infusoria and bacteria in ice than in the water from which it was frozen, but the ice contained them in numbers sufficient to preclude its use. In harvesting ice, the greatest care should be taken to get it from a pure source. This valuable paper will be published in the report of the board.

The Secretary presented a summary compiled from lists of medical practitioners, registered under the new law. The number of counties in the State is 80, from 76 of which reports have been received. The number of registrations returned is 3,285, but in some cases physicians are registered in two or more counties. The number reported to have graduated is 2,351; those who had attended some college but had not graduated, 208; those who had attended no college, 726. The number, belonging to all schools, reported as having graduated, is 72 per cent. of the whole number; The non-graduated collegiates are 6 per cent., and the non-collegiates are 22 per cent. of the whole number. The "graduates" are from all classes of medical colleges, hospitals, medical societies, etc. The number of different "schools" of medicine reported in these sworn statements is about 75, including "Cureopathic," "Indian," etc. In at least one instance it is reported that the sworn statement had to be signed by a "mark," the practitioner being unable to write even his own name. The number registered as belonging to the four most prominent schools of medicine are as follows: Regular, 1,533; Homœopathic, 490; Allopathic, 398; Eclectic, 366. The proportion of graduates to practitioners is: Regular, 87 per cent.; Homœopathic, 74 per cent.; Allopathic, 81 per cent.; Eclectic, 47 per cent. (Of all schools, as above stated, the per cent is 72.)

It was decided to print the names and addresses of the health officers in Michigan as soon as full returns are received. The number in the State is nearly 1,400. A new edition of the document on the prevention and restriction of scarlet fever was ordered, the last edition of 30,000 copies being nearly exhausted. It was also decided to publish facts relative to several outbreaks of trichiniasis in Michigan.

The following resolutions were unanimously adopted:

Resolved, That this Michigan State Board of Health respectfully and earnestly memorializes Congress to pass the bill, introduced into the House of Representatives Jan. 8, 1884, by the Hon. Casey Young, or of some similar bill, providing for the prevention of the introduction of infectious diseases into the United States, and for procuring information relating to climatic and other conditions affecting the public health.

Resolved, That we consider the National Board of Health the best existing and the proper agency to carry on the work mentioned in the preceding resolution.

The Board discussed the merits of several textbooks on physiology and hygiene, with special reference to the effects of alcohol on the human system, and approved for use in the schools. Martin's "Human Body," briefer course, second edition, containing special chapter on alcohol and other narcotics; and Dr. Eli F. Brown's "Alcohol; Its Effects on Body and Mind."

The amount of office work during the quarter has been large, and has included the perfecting of arrangements for holding a Sanitary Convention at Hillsdale; preparation of the proceedings of the Ionia Sanitary Convention for the printer; the making of a compilation of the public-health laws of Michigan; proof-reading on 96 pages of the Annual Report; issuing blanks for the return of the new health officers in each city, village, and township in Michigan; issuing the regular weekly bulletins of meteorology, and of sickness in Michigan; the correspondence of the office (postals are not usually copied), covering 750 pages of letter-copying book, of which over 150 pages have direct reference to the prevention and restriction of communicable diseases in Michigan; and the regular computations of data relating to meteorology and sickness.

FIRST CONVENTION OF THE INDIANA STATE SANITARY SOCIETY.—*Reception Committee:* Hon. Jason B. Brown, Chairman; Mayor D. W. Johnson, J. D. Shields, M.D.; Hon. A. P. Charles; C. C. Frey, Esq.; J. H. Andrews, Esq.; Peter L. Carter, Esq.; C. B. Cole, Esq.; J. H. Charlton, M.D.; Hon. W. D. Marshall; J. W. Stratton, Esq.; L. M. Boland, Esq.; E. E. Rettig, Esq.; W. T. Branaman.

Committee of Arrangements: Peter Platter, Esq., Chairman; Hon. D. W. Johnson; Capt. Joseph Balsley.

Committee on Programme: L. S. Oppenheimer, M.D., Chairman; S. H. Charlton, M.D.; T. S. Galbraith, M.D.

Committee on State Medicine: Thad. M. Stevens, Chairman, Indianapolis; William Lomax, M.D., Marion, Grant County; J. D. Gatch, M.D., Lawrenceburg; George Sutton, M.D., Aurora; J. M. Wooden, M.D., Greensburg.

The first session of the Indiana State Sanitary Convention was opened at Seymour, Indiana, March 12 and 13, 1884, with Dr. Norbourne N. Shipman in the chair. Letters of regret were read from prominent sanitarians. Dr. Thad. M. Stevens, of Indianapolis, read a paper on the purposes of a State sanitary society. Legislation concerning the destruction of filth was treated by Rev. George L. Curtis, of Jeffersonville. His conclusion, drawn in part from the experiences during the recent flood, were suggestive of the effects of filth as a cause of disease. In the afternoon Hon. F. J. Van Voorhees, of Indianapolis, presented a paper on food and raiment, showing the necessity of proper food, well prepared, and sufficient clothing, made on common sense principles. The proper ventilation of homes and public buildings was the subject of a paper by Dr. W. S. Haymond, of Indianapolis. A paper on chest pressure, by Prof. Thomas Harrison, of Brownstown, was read, illustrating the inevitable injuries following tight lacing. In the evening Dr. Shipman read an address on the proper way to teach sanitation. Mrs. Virginia L. Oppenheimer read a paper on sanitary cooking. On Thursday, the second day, Dr. M. L. Boas, Secretary of the County Board of Health, presented a sanitary survey of Jackson county, in which he was particularly severe on farming out medical attendance at the asylum. Dr. J. M. Moulder, of Kokomo, read a paper on the influence of tobacco and alcohol on the human race. Dr. E. S. Elder, Secretary of the State Board of Health of Indiana, read a strong paper on the objects and uses of the State and local boards of health, The importance of compulsory vaccination was argued by Dr. T. A. Graham, of Jeffersonville. Dr. J. W. Hervey, of Indianapolis, one of the veterans in sanitary work in Indiana, read a paper on the influence of habits and uses on the public health. A committee read resolutions on the death of Dr. L. P. Yandell, of Louisville, which were adopted. Dr. S. H. Chalton, after presenting a synopsis of his sanitary survey of Jackson county, was requested to complete it for the committee on publication. There was a large attendance at the closing session of the convention in the evening. A paper on nearsightedness in children was read by Dr. W. Cheatham, of Louisville, which was illustrated by several magic lantern views. A pleasant feature of the meetings was the free discussion of the papers presented. After votes of thanks, the convention adjourned.

It is the purpose of the State Sanitary Society to call other conventions at an early date.

DOMESTIC CORRESPONDENCE.

FROM WASHINGTON.

Medical Matters Before Congress.—April 7, Representative Murphy introduced a bill (H.R. 6524), declaring that all persons who, during the late war of the Rebellion, served in the Union Army as contract surgeons, shall be entitled to all the rights, benefits, and privileges conferred on surgeons and assistant surgeons of the army under the various provisions of the homestead laws. It was referred to the committee on military officers.

Medical Societies, etc.—A new Medical Society has recently been started here, which has been incorporated as the Medico-Chirurgical Society of the District of Columbia. Dr. Robert Reyburn is the President, and, among others, it includes all the colored practitioners of medicine in good standing in the District. It seems to emanate mainly from the faculty and graduates of the medical department of Howard University.

NECROLOGY.

OBITUARY NOTICE.

B. H. Reynolds, M.D., died at his residence in Manchester, Delaware county, Iowa, Nov. 13, 1883. He was born in Greene county, New York, July 22, 1839, and consequently was little over forty-four years of age. When a boy of ten years, he came with his parents to Indiana. In 1861 he enlisted as a soldier in the 76th Regiment Illinois Volunteers, and served nearly three years. During the war he gave evidence of skill in nursing, and was twice placed in charge of a hospital, as hospital steward. One of these hospitals was at Vicksburg, Miss. While in charge of them he was highly complimented by the governmental inspectors upon the excellent sanitary condition of his wards, and his careful attention to hygienic details. At this time he decided upon his future course, and began his medical studies. In fact, he was even during this period called by most of his comrades "doctor." At the close of the war he attended a course of medical lectures at the University of Michigan. In 1866 he came to Masonville, Iowa, and began the practice of medicine, but did not complete his course of study until the winter of 1871–'72, when he graduated at the Iowa State University. In 1874 he removed to Manchester, Iowa, where he continued his practice until death. He married Miss Jennie Peterson, of La Porte, Ind., Feb. 9, 1864. She still survives him, but he left no children. For a number of years Dr. Reynolds was President of the Delaware County Medical Society. Its members attended his funeral in a body, as a mark of respect for their departed Fellow. He was also a member of the Iowa State Medical Society, and of the American Medical Association. He attended the last session of the latter at Cleveland, Ohio, in June, 1883. He was a member of the M. E. Church of Manchester, and his funeral occurred from thence, on Saturday, Nov. 17, 1883. It was very largely attended, people coming from all parts of the county to attend the funeral of their physician and friend. As a physician, Dr. Reynolds was deservedly popular. Possessed of a wonderfully genial and kindly disposition, his very presence brought comfort and good-cheer to his patients in their dis-

tresses. Cut down in his prime, and in the midst of a large and busy practice, it seems difficult to understand *why* he should be so taken, and to yield submission to his removal. Of apparently strong and vigorous constitution, firm and elastic step, and imposing presence, few gave promise of longer life than he. But the silver cord is loosed, the golden bowl is broken, and he has gone to his long home. A post-mortem examination revealed a very extensive meningitis, more severe at base of brain. In the anterior and middle fossæ, the membranes were everywhere firmly adherent to the skull. The bone itself was also softened and fragile. The petrous portion of left temporal bone was easily broken by slight manipulations. A large effusion of sanious pus was found within the membranes, estimated at about 2½ ounces in quantity. In the right temporal region was a considerable extravasation of blood. In view of these lesions, it seems almost incomprehensible that there was so little disturbance of reason and mental activity. He was almost constantly rational, until about twenty-four hours before death.

N. S. C.

ROBERTSON, CHARLES, M.D., died at his residence in McConnelsville, Morgan County, Ohio, March 24, 1884. He was born at Leesburgh, Va., July 13, 1799. His parents moved to St. Clairsville, Ohio, about 1810, where he learned printing, in the office of the Ohio *Federalist*, then edited by the late Charles Hammond, Esq. The doctor was appointed postmaster at St. Clairsville. He studied medicine with Dr. W. Wood. Dr. Robertson was the oldest living charter member of the Morgan County Medical Society. He was for several years a member of the Ohio State Medical Society, and a delegate to the American Medical Association in 1856. He was married to Eveline S. Foulke, by whom he had four children, only one of whom is living. Eveline died, and he married Dessa Brown, of Pittsburgh, Pa., by whom he had one child, who with her mother survive him. When the doctor was first married he moved to Woodsfield. He removed to McConnelsville in the spring of 1826, formed a partnership with Dr. S. A. Barker, which continued till Dr. Barker was appointed Registrar of the land office, and removed to Zanesville, Ohio. Dr. Robertson graduated at the Jefferson Medical College, Philadelphia, Pa., in 1849. He was Enrolling Surgeon of the Fifteenth District of Ohio in the late war. He was a very successful physician, and for nearly half a century was an eminently useful member of the Morgan County Medical Society. He was one of its most energetic and worthy members, a true friend to his associates and a noble man. H. J. NOYES, M.D., of Ohio.

AN INTERESTING TREE.—At a recent meeting of the Berlin Medical Society, Prof. Virchow showed photographs of a gigantic plane-tree in the island of Cos, under the shade of which Hippocrates is said, by tradition, to have held medical consultations. The tree now stands in the market-place of the town of Cos, on the east side of the island. The branches, which spread over nearly the whole market-place, are supported by marble pillars.

SPECIAL NOTICES.

INTERNATIONAL HEALTH EXHIBITION.

The Secretary of the Library Committee presents his compliments to the editor of the JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION, and requests the insertion of the following paragraph:

INTERNATIONAL HEALTH EXHIBITION.—A somewhat novel feature in connection with the exhibition this year will be the establishment of a library and reading-room, a home for which the Executive Council have assigned in the large double room in the Albert hall, overlooking the conservatory. Steps have been taken to secure a representative collection of works on vital statistics; of reports and regulations relating to public health; of regulations with reference to injurious trades and works thereon; and of reports, statistics, and other works on the science of education. Foreign powers have been invited to lend their coöperation in this effort to create an internationat library of works of reference bearing on the two divisions of the exhibition, and several responses have already been received. India and the Colonies have also been asked to contribute towards the same end. Publishers and authors have likewise been invited to forward copies of their works. In addition to the library of reference, there will be a reading room, to which the current numbers of periodical publications of a sanitary or educational character will be admitted. All books and periodicals sent to the library and reading room will, under certain regulations, be arranged for the use of visitors, and not merely for exhibition. The books will be submitted to the jurors, and a full catalogue will be issued. All parcels for the library and reading room should be addressed, carriage paid, to the Secretary of the Library Sub-Committee, Royal Albert Hall, London, S. W.

April 2, 1884.

FLORIDA MEDICAL ASSOCIATION.

The Florida State Medical Association will hold its annual meeting in the city of Jacksonville, on Wednesday, June 4, 1884, at 12 M.

County Medical Societies are invited to send delegates, and all physicians who are graduates from regular schools of medicine, are cordially invited to be present.

Essays are promised by the following physicians:

Dr. R. B. S. Hargis, "Malaria and the Relations of Micro-Organisms to Disease."

Dr. R. P. Daniel, "The Tongue in Disease, and its Diagnostic Value."

Dr. C. J. Kenworthy, "Phthisis Pulmonalis."

Essays expected from other prominent physicians.

T. M. Palmer, M.D., Orator.

Efforts will be made by the Committee of Arrange-

ments to obtain half rate tickets on railroad and steamboat lines for delegates to the Association.

E. T. SABAL, M.D., Pres.

Attest: A. W. KNIGHT, M.D., Sec.

Office of Secretary, Jacksonville, Fla., April 3, 1884.

ROCKY MOUNTAIN MEDICAL ASSOCIATION.

The thirteenth annual meeting of this association will be held in the City of Washington, on Wednesday evening, May 7, at 8 o'clock P. M. The place of meeting will be announced by the Secretary of the American Medical Association from the platform, on May 6.

The annual address will be delivered by the President, Dr. J. F. Hibberd; of Richmond, Ind.

As the number of members of this association is yearly decreasing, it is hoped that there will be a full attendance.

JOHN MORRIS, Sec.

5 Franklin St., Baltimore, Md.

RAILROAD NOTICE.

Dear Dr. Davis:—I am authorized to make the following statement. It came too late for insertion in the *Courier-Record*, where it was intended to be published, but I thought if it were printed in your journal, it would still reach a large number of persons interested, in this State.

The Piedmont Air-Line have tendered the Medical Association of Texas one round-trip rate, of $49.50, to Washington, to the convention of the American Medical Association, in May. This rate will be participated in by the Gulf, Colorado and Santa Fe Road. and the G. H. & S. A., and the N. O., Tex. Railways. This rate, good for thirty days, and parties wishing to do so, can stop off at points on the return to Texas. The trains leave Houston at 6 P. M., and arrive at Washington on the third morning at 10 o'clock. Through sleeper from New Orleans to Washington, without change.

For information, and for sleeping-car berth, apply to

JAMES M. MEANS,
Gen. Tex. Pass. Agt., Houston, Tex.

April 14, 1884.

BALTIMORE & OHIO R. R.

The Baltimore and Ohio R. R. will run a special train of palace coaches, exclusively for physicians and members of their family, leaving Chicago on Sunday, at 3 P. M., May 3, arriving at Washington about 4 P. M. of next day. Fare to Washington is $17.50 from Chicago. Return fare at one-fourth the unlimited rate. Tickets good for 30 days. By charter of sleeping cars on this train at $100 each, 26 berths to a car would make the rate $3.85 per berth.

The fare via the P. F. W. and Pennsylvania Roads, also a direct line from Chicago to Washington, is the same on their regular trains, namely, $17.50, and all other lines have made rates in the same proportion, as was announced in last week's JOURNAL, which will doubtless secure a larger attendance than at any of the previous meetings.

NEW BOOKS.

Martin, H. Newell, and Nerale, W. A. Handbook of Vertebrate Dissection. Pt. 3 How to dissect a rodent. New York: Macmillan. 60c.

Annuaire médical et pharmaceutique de la France, pour 1884. Paris: 18mo., 536 pp. 4 fr.

Bardet, G. Traité élémentaire et pratique d'électricité medicale. Paris: Doin. 8vo. x, 645 pp., avec 234 fig. 10 fr.

Bourgougnon, H. Recherches sur l'état du cœur à la fin de la grossesse et dans les suites de couches. Paris: Davy. 8vo., 71 pp.

Bruel, G. De l'éther amyl-valérianique (principe actif des pommes) de son action sur la cholestérine, de sa supériorité sur le chloroforme comme dissolvant des calculs hépatiques, et de ses actions thérapeutiques. Paris: Paul Dupont. 8vo, 11 pp.

LIST OF CHANGES IN THE STATIONS OF MEDICAL OFFICERS, U. S. NAVY, FOR THE WEEK ENDING APRIL 19, 1884.

Medical Inspector H. C. Nelson, detached from Navy Yard, Washington, and placed on waiting orders.

Surgeon D. McMurtrie, ordered to duty at Navy Yard, Washington.

Medical Director P. S. Wales, to continue on duty as member of Ration Board.

Surgeon H. M. Wells, to special duty at Hot Springs, Ark.

Medical Director Geo. Peck, ordered as President of Board of Medical Officers, detailed for special duty at Coaster's Island, near Newport, R. I.

Medical Director A C. Gorgas and Surgeon I. C. Wise, members of above Board.

OFFICIAL LIST OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT UNITED STATES ARMY, FROM APRIL 12, 1884, TO APRIL 18, 1884.

Baily, Joseph C, Major and Surgeon, leave of absence extended tor three months. (By par. 8, S. O. 83, A. G. O., April 10, 1 4.)

Newton, R C., 1st Lieutenant and Assistant Surgeon, relieved from duty at Fort Sill, Ind. Ter., and ordered to Fort Elliott, Tex., for duty. (Par. 1, S. O. 77, Headquarters' Department of the Missouri, April 14, 1 4.)

Vilcher, James E., 1st Lieutenant and Assistant-Surgeon, assigned to duty at Camp Poplar River, Mont. (Par. 2, S. O. 37, Headquarters Dept. of Dak., April 7, 1 4.

Chapin, Alonzo R., 1st Lieutanant and Assistant-Surgeon relieved from Duty at Fort Douglas, Utah, and ordered to Fort Laramie, Wyo., for duty. (Par. 2, S. O. 33, Headquarters, Dept of the Platte, April 15, 1 4)

Wales, Philip G., 1st Liutenant and Assistant-Surgeon, ordered to report to the commanding general, Dept. of the Columbia, for assignment to duty. (Par. 11, S. O. 84, N. G. O., April 11, 1 4)

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THE AMERICAN MEDICAL ASSOCIATION

AND OF ITS SEVERAL SECTIONS 1883-4.

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Place of meeting, 1884, Washington, D. C.; Time of holding meeting, first Tuesday in May.

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THE PHYSICAL AND HEREDITARY NATURE OF VICE.

BY U. P. STAIR, M.D.

The question as to whether the basis of moral states, which find their expression in conduct, are to be sought for in existing brain activities, pathological or physiological, is one which is taking a more or less leading place in modern scientific thought.

Stripped of all its theological associations, and viewed solely from a scientific standpoint, to say nothing of its legal bearings, the question becomes one of no little importance.

Is there, then, a pathological or abnormal basis for vice to be found in the brain of the so-called criminal classes?

The first point of importance to be noted is the claim that, lying at the bottom of those perturbations of conduct which characterize these classes, and which constitute their chief or sole cause, is to be found a lack of proper brain development, and that this physical defect is the constant heritage of these classes, through hereditary transmission. Thus, it is a very common form of the argument to treat the relations existing between vice and crime and a lack of mental culture, as inseparable, and always as that of cause and effect. Moreover, there is a manifest tendency to regard physical diseases of other organs than the brain as also causes of moral perturbations, so that, as a logical consequence, the educator, but very largely the physician and sanitarian, are henceforth to be held responsible for the moral, as well as the physical delinquencies of the race.

Now, we wish, as briefly as may be, to inquire whether these claims are true; whether, for instance, common observation of the social facts around us will warrant us in accepting the doctrine that ignorance, simply, from a lack of brain development, is the cause of the vice and crime so prevalent in our midst.

In the first place, it must be admitted that a very large class indeed of the best people, morally speaking, of our own country, as well as across the water, are far from being cultured or educated people. Especially is this true in the rural districts. Here, and often amongst the lowliest and least cultured ones, are to be found the moral bone and sinew of our land; whilst it is no less an undeniable fact that no insignificant number of our great criminals are from the educated and cultured classes. There are cultured villains as well as grossly ignorant ones. It follows, then, that mental culture solely, though associated with its consequent brain development, as a standard of moral rectitude, is wholly worthless. The main question is, Is there brain power enough to discern vice from virtue, right from wrong, with strength of will to choose between them? This, it would seem, covers the whole ground. The relation of cause and effect, then, between ignorance and crime, is largely a forced one. On the contrary, it is far more likely that they are children of the same parentage, namely, poverty and degraded social position. A constant struggle for existence begets carelessness in moral distinctions. In the same struggle is to be found, also, a fruitful source of the enforced ignorance which is so common an associate.

Then, again, in respect to the hereditary aspect of vice, are we warranted by the facts of daily observation in regarding moral traits, or even mental peculiarities, as being capable of hereditary transmission? We know it may seem idle, to many, to open this question. But it is not a question to be answered in the interest simply of a preconceived theory. The question is one of fact, and we are endeavoring to see if the facts of daily observation lead unmistakably to this view, or whether they cast doubt upon it.

We have no disposition to inquire into the ultimate nature of heredity. It may be sufficient to remark, however, that the speculative theories of Mr. Darwin and others, wherein they would imply an absolute *material* nexus between parent and offspring, are entirely too vague for any practical, or even scientific value. It is coming to be recognized that heredity probably does not involve a material transmission at all.[1] It is more likely that the type or plan of organization upon which one or all of the different tissues of the body are built up, carries with it all that there is embraced in the term. For example, Prof. Formad, of Philadelphia, believes, and with good reasons, that a defective organization of the connective tissue lies at the foundation of scrofula and tuberculosis. For the same reason, we may regard some physical defect as constituting the tendency, also, by which certain mental diseases are transmitted. It is a common error for those whom we think exaggerate the influence of heredity, in biological processes, to seize upon cases of the rarest exception as evidence

[1] Richardson, Diseases of Modern Life, p. 30

in favor of their views, while the vast majority that oppose are passed over in silence. Thus, Mr. Darwin refers with evident gratification to an instance recently sent him by an American correspondent, where a man with traumatic enlargement of the tips of both thumbs transmitted the peculiarity to various branches of the family line. However, it should be remembered that if the instances where accidental deformities were never transmitted at all could all be recorded, they would doubtless be as infinity to one. Besides, it is quite probable that the defect here said to have been transmitted may have been due to the abnormal type of tissue organization which results in phthisis and its associated "clubbed nail" condition.

The same method of reasoning is also pursued by many of those who are now engaged in the investigation of mental and moral perturbations. Thus, a recent writer unhesitatingly declares that "It is a demonstrable fact, that children of illegitimate parentage are peculiarly liable to become addicted to vice and crime, as a result of an hereditarily defective moral sense."[1] To this we must demur, most decidedly, until the "demonstration" is forthcoming. On the contrary, we have in mind at the present hour, at least a dozen or more of the offspring of such parentage, and not one of them shows the least more vicious or criminal tendencies than children of legal unions. In fact, some of them exhibit an unusually scrupulous regard for moral distinctions. It would seem, as well, that the doctrine of transmitted intellectual peculiarities can scarcely be sustained by common observation. Certainly, there has been but *one* Homer, Shakespeare or Milton; but one Cæsar or Napoleon, Phidias, Michael Angelo, Demosthenes or Webster, while numberless weaklings, throughout the history of the past, have held their crowns only by force of arms. If heredity prevails in the realm of intellect, why was the greatness of these names born with these particular individuals, and above all, why did it so utterly perish at their death?

The further claim, upon which so much is based in recent times, that the present bulk of brain and consequent mental status of man, has been acquired only through the transmitted experiences of the race, through ages of time, is just now being sorely tested. The Australian Bushman, who has been heretofore regarded as so low in the scale of humanity, that he had no idea of a God, and the extent of whose mentality consisted in his being able to count to the number of four, has recently, by the influence of Christian teaching, been raised up to the enjoyment of a civilized home, in which the sewing-machine and cabinet organ play their usual part; and that, too, in the short space of ten years' time.[2] We feel at liberty to thus trespass upon what may seem to be unscientific ground, for the reason that the writer from whom we just quoted suggests, from his point of view, that moral delinquencies may be quite as amenable to correction through the influence of medicine, as through that of the church.

In returning to speak of the claim that in the vicious and criminal classes there is an "atypical" or abnormal brain development, corresponding to the moral condition, let it be remarked that this abnormality, if it exists, must consist, grossly speaking, in quality, rather than in quantity. We believe that it is now nowhere maintained that brain mass, simply, at least within certain limits, is to be considered a standard by which mental capacity is to be judged. Neither can any particular *form* of brain be essential to vigorous and healthy mental action, as is conclusively shown by Dr. J. C. Dalton in the New York *Med. Journal* of March 8, 1884. Hence, any change in position or direction of certain gyri or fissures, or number of convolutions, could have but little weight in determining the question. When we remember, further, that it is only the most profound dsseases of the nervous system, associated with which are also grave general disorders, that show any pathological lesions whatever, the possibility of demonstrating the existence of vice in the subject by the use of the scalpel becomes extremely improbable—indeed, after speaking with great force and clearness upon this point, Dr. Spitzka declares that only in paretic dementia, with organic disease elsewhere, "does the autopsy approximate the dignity, from every point of view, of a scientifically positive test.[1] If, then, such grave troubles as mania and melancholia present no appreciable lesions whatever which can be discovered by the closest scrutiny, is it at all likely that a physical basis for the far more occult moral manifestations can be laid bare by dissection?

Conceding for the moment that there is an atypical brain development lying at the bottom of vice and crime, let us inquire along what particular lines shall improvement be attempted, and what particular methods are to be adopted, in order to antidote the vicious brain? Will an appeal to the intellect simply be sufficient? No doubt the higher brain is the organ both of the intellect and the moral sense. Will an education which appeals to the intellectual faculties only, carry with it moral growth and strength also? Intellectual growth alone only changes the character and social standing of the criminal. Ignorance and the lowest forms of vice are associated. Culture and the higher crimes, such as forgery and embezzlement, are on equally as good terms. We are well aware that it is fashionable just now, to sneer at moral influences in shaping human conduct. Man is a creature of circumstances. His mental and moral energies are but the reflex of the activities of his nervous system, and that is as the current physical conditions make it. We have just had the "startling" conclusion forced upon us, with a "dogmatism" equal, at least, to that of the "moralist" or theologian, that "Inebriates are the result of physical causes and conditions; that they are grown and manufactured as much so as cotton and wool, and the machines to work them into fabrics."[2] But, on the other hand, when the "inexorable power" of heredity is being appealed to, all known physical law is set at defiance. Mental and moral qualities, which possess no appreciable physical equivalent, are transmitted, as accumulated experiences, so much in weight avoirdupois, so that

[1] G. Frank Lydston, *Chicago Med. Jour. and Exam.*, Feb., 1883.
[2] See report of Moravian Mission for 1881.

[1] Insanity, page 100.
[2] *Journal Amer. Med. Assoc.*, Jan. 5, 1884, p. 5

Mr. Spencer declares "that thus it happens that the European inhabits from twenty to thirty inches more brain than the Lapman," and Maudsley that "the true thief is born and not made," and M. Ribot that the passion for gambling may even be acquired by the fœtus *in utero*, while "moral anæsthesia" is transmitted by a single genetic act, and the delicate and almost transcendental impress which constitutes the essence of heredity is still grossly spoken of by some authors of high repute as "seeds" and "germs" with as much assurance as though they were objects of daily observation and manipulation.

It is to the unfortunate criminal classes, however, to which is applied the law of heredity thus rigidly interpreted, and it is likewise to them that is denied the benign influences of proper moral training, which has been, as we think, of immeasurably more consequence, as a cause of their low moral and intellectual status. We have ventured to doubt that moral traits are by any means as uniformly transmitted by heredity as is commonly claimed. We are not deterred from this view, even though Mr. Spencer declares that "If any one denies that children bear likeness to their progenitors in character and capacity, if he holds that men whose parents and grand-parents were habitual criminals have tendencies as good as those of men whose parents and grand-parents were industrious and upright, he may consistently hold that it matters not from what families in a society the successive generations descend." It is plain that Mr. Spencer ignores here, one of the most important factors in the problem, namely, moral training, the home influence and the precept and example of parents and associates upon the tender sensibilities of the child. This thought is so vigorously and aptly expressed by a recent French writer, Mr Alfred Fouille,[1] that we cannot do better than to give his views at some length. After speaking of the theories of Mr. Spencer and Mr. Darwin relative to the debasement of society through the influence of heredity, he says: "In fact, the law of mental and moral heredity, which is their principle, is much more vague and loose than the law of physical heredity. What is the meaning of the unprecise expression 'a society lowered by the artificial preservation of the individuals least capable of taking care of themselves?' Does Mr. Spencer mean that parents, in the habit, for example, of soliciting at the charitable institutions, will beget children endowed wilh the innate disposition to go to the same institutions? England certainly offers a spectacle of this kind of poor who are assisted from father to son by the parishes. * * But whose fault is it? Is it not the fault of the bad education received by the children rather than heredity of temperament?

If those children were brought up with the children of a lord, would they exhibit an innate propensity to beg or to be assisted by others? We believe generally that Messrs. Spencer and Darwin, as well as Messrs. Jacoby and Ribot, attribute too great a part to heredity, too little a one to education and circumstances." This, then, would seem to embrace the whole field of argument. What is applicable here to the poor and degraded classes of England, is equally applicable to the so-called criminal classes, not only there, but in our own country also.

It may be further observed that the most recent interpretations of leading alienists tend to obliterate entirely the line of demarkation between sanity and insanity. But certainly if sanity is but a relative term only, if it is not a standard or fixed mental condition, then all attempts at a logical discussion of the question in hand may as well be abandoned at once. But we think we are fully justified in assuming that this healthy standard exists. Then, given a healthy brain, whether selected from the Australian aborigines, or the Caucasian branches of the race; whether from the slums of London, New York, or Chicago, and place its possessor under the earliest and most favorable moral influences, and there is certainly very little to show, even despite the power of heredity, why the highest ethical results may not accrue to which the race has yet attained.

In view of the foregoing observations, then, it is maintained:

First, that ignorance is not a necessary cause of vice; that the amount of wrong doing, as a result of ignorance, is infinitely small when compared with that indulged in from a wilful disregard of the moral code.

Second, that at the present stage of investigation of cerebral pathology, it is scarcely to be expected that anything but negative results would follow any serious effort to demonstrate a physical basis for vice in the brain, by the use of the scalpel and microscope; and,

Third, Following upon this, and in perfect harmony with it, observation and experience fail to establish the claim that vice and crime are qualities capable of being transmitted by heredity to any such extent as to constitute a distinct and definite class in human society; and, above all, that there is a *moral* force in the social world, to which, in its sphere, heredity is wholly subservient, which is as positive and potent in its influence as that of gravitation in the physical universe, and he who would teach sociology and ignore the former, is as unsafe a leader to follow, as he would be who should attempt to teach physics and ignore the latter.

[1] *Popular Science Monthly*, January, 1883, p. 314.

PARALDEHYDE, SUGAR AND GERM DISEASES.

[Read before the Baltimore Academy of Medicine, November 20, 1883.]

BY J. R. UHLER, M.D.

The substances that I am about to describe are interesting alike for their properties and suggestiveness, since they belong to a class of bodies that, through fermentation and degradation, are closely allied with alcohol and acetic acid. Paraldehyde was first employed by the Italians, and if we can trust accounts in the journals and individual experience, it is a very useful addition to the list of antispasmodic

and sleep-producing agents. In both the concentrated and dilute state it smells and tastes somewhat like sweet spirits of nitre, but when a drop is placed on the back of the tongue, a more pungent, musty, and bitter sensation will be experienced. The odor from its vapor quickly fills an apartment, but it seems to evaporate more slowly than chloroform or ether. Its chemical formula is $C^6 H^{12} O^3$, and, as the name indicates, is either a more condensed form of, or is very similar to, dehydrogenated alcohol. At ordinary temperatures it is a colorless liquid, neutral or slightly acid to litmus paper, and boils at 225° Fahrenheit. Its specific gravity is ·998, and at 52° F. it dissolves in eight parts of water. Paraldehyde is usually given largely diluted with water, and passes unchanged from the body by way of the lungs, the breath smelling very distinctly of it. The dose is from ʒss to ʒiiss, and the effect usually proportionate to the quantity administered. In cases of melancholia, accompanied with sleeplessness, the larger amount is frequently required, but the best plan is to commence with ʒss, and gradually increase until its effects are visible. The sleep occasioned by this agent is not usually so profound as that induced by choral, but when the latter causes unpleasant effects, or the patient has to use a sleep-producer for a long time, paraldehyde is a very efficient aid. It does not cause excitement in the early stage of its action, nor is the heart interfered with, and altogether it appears to be a safer remedy than other hypnotics. To produce sleep during fevers it is very useful, and may have an advantageous effect upon the duration of some cases by modifying the cause. The distress of the opium eater is mitigated by it, alternated with chloral, and in hysteria it is at times invaluable. I have used it since last July as a hypnotic in a case of what might be termed dread of sleep, and also in very obstinate wakefulness from melancholia, accompanied with suicidal tendencies. In the first condition, ʒss acted as well as the same quantity of chloral, and upon awakening there was neither depression, nausea, or other unpleasant effects. The case of melancholia had been using chloral once or twice nightly for more than two years in ʒss or ℈ij doses, though on two occasions as much as an ʒj was taken on her own responsibility, without producing death. So large a quantity caused much irritation of the stomach, as well as vomiting, and this without doubt saved her life. Very obstinate eruptions also followed the abuse of the drug, and disintegration of the red-corpuscles seemed to take place in spots under the skin, resembling purpura. The eyelids, and tissues in the neighborhood of the lower ones, became distended with yellow serum, and a squamous skin disease, accompanied with diarrhœa and great prostration, set in. No albumen or tube-casts were found in the urine, and upon the withdrawal of the drug the urgent symptoms gradually disappeared. Half a drachm of paraldehyde would sometimes make this patient sleep for two hours, but generally four or five times that amount was required. I have also given it in phthisis, measles, neuralgia, diphtheria, spasmodic croup, asthma, and in a case supposed to be whooping-cough, with the most prompt and gratifying result. Other sufferers from pertussis have been greatly benefited, and have had the number of paroxysms much diminished, and I deem the drug worthy of further trial in hypnotic doses in this very obstinate affection. In Bright's Disease, epileptiform convulsions, and inflammation of the upper part of the spinal cord, paraldehyde may do harm, as it seems to "act first upon the cerebral hemispheres, and then extends its influence to the medulla and cord." An overdose is said to "suspend the action of the medulla oblongata and respiratory centers, and after these the heart." I have tried it internally on infants of three, six, and twelve months; upon children, adults, and in extreme old age, but have never seen any harm occur except when there was already some stupor, which it seemed to increase. The drug will, without doubt, prove useful in rheumatism, gout, prurigo, chordee, hysteria, chorea, hiccough, hepatic colic, muscular twitchings, and many diseases where spasm is an important symptom. Dropped upon an abrasion of the wrist, it smarted like alcohol, but appeared to have little effect upon the healing of the sore. Inhaled in small quantity, with free access of air, in phthisis, diphtheria, and spasmodic cough, it sometimes caused drowsiness, and seemed to excite a slight burning sensation in the throat, but otherwise produced no unpleasant effects upon the glottis or lungs. Alone or alternated with tincture of veratrum viride or chloral, it is worthy of persistent trial in tetanus, as the physiological action of paraldehyde appears to teach that good might be expected in that condition, and it is known to be antagonistic to strychnia. Some experiments that I have tried seem to indicate that strong paraldehyde has antiseptic properties resembling the substance from which it is made. A piece of raw beef kept in the pure material shrivels, hardens, and whitens, but does not perceptibly decay, and under the microscope shows an appearance somewhat like that which alcohol or acetic acid produces.

A similar piece of raw muscle placed in equal quantities of paraldehyde and water, behaves in a corresponding manner, but at the point where the two liquids meet, pale yellow globules are visible to the naked eye, that float about in a film and look like fat.

Fragments of raw beef were also suspended from the bottoms of corks in bottles, so as to be surrounded by the vapor of pure paraldehyde and paraldehyde mixed with water, and seemed at moderate temperatures to undergo little or no decomposition. They became harder and darker than similar muscles immersed in strong and diluted paraldehyde, and smelt very distinctly of the drug when removed from the bottle; but at the end of five weeks, though much shrunken, had not otherwise perceptibly changed. Placed under the microscope at this time, the muscular fiber resembles in most respects that which has been kept in strong alcohol. In the cold concentrated condition, paraldehyde dissolves a small quantity of cholesterine, and other fatty constituents of gall-stones, affording most beautiful crystals for the microscope. Urine mixed immediately after its passage with one-third its bulk of paraldehyde, at the expiration of six weeks is still acid to litmus paper.

Microscopic examination on the second day showed crystals of oxalate of lime, and now it contains the same, with a few masses of triple phosphate. There is some sediment in it that looks a little suspicious, but I have not found any vibrios as yet, nor this there any free ammonia.

Paraldehyde mixed with sterilized grape sugar solution in an inverted test tube, and subjected to the proper temperature, does not cause fermentation in the course of six days. Yeast mixed with an equal quantity of paraldehyde, does not ferment cane or grape sugar solution in four and six days, respectively, as I have proved in the following manner: A number of test tubes, after washing, were purified by boiling in water, and when cool enough, were immediately filled with solution of cane sugar, that had also been boiled. Into these, at 70° F., some yeast that had been kept in paraldehyde for twelve hours, and then allowed to evaporate without heat, was placed, and the tubes were inverted in more of the sterilized cane sugar solution. At the end of twelve, twenty-four, thirty-six, forty-eight, and every twelve hours until the termination of the fourth and sixth day, they were examined, but no carbonic acid was formed. The same experiment was performed many times in a more perfect manner with raisin water, sterilized by heat, the yeast and paraldehyde being added in equal quantities after it had cooled, but no fermentation occurred. More dilute preparations of paraldehyde and yeast were also tried in various manners, with week raisin juice that had been boiled, until at last a point was reached where the sugar fermented. With small quantities of yeast and less paraldehyde, results were often contradictory, as germs from the atmosphere during the long time required, are likely to get in the sugary fluid where the inverted tubes stand, set up fermentation, and thus deceive. A portion of the yeast also diffuses itself throughout the liquid, and thus gives less gas in the tube than it ought. These difficulties were finally overcome by using cotton wadding that had been boiled to close the mouth of each tube to keep the yeast in, and the tubes, when full, were immersed in clean mercury. As the tubes containing wadding are hard to turn upside down without admitting air, this plan was finally abandoned, and we were satisfied with simply inverting them in clean mercury. To determine whether the yeast that had failed to ferment with the large quantity of paraldehyde, had been killed or was merely delayed in its action by the presence of the drug, of which the solution strongly smelled, it was diluted with some fresh sterilized raisin juice, and again put into test tubes, inverted over mercury and allowed to remain during four days, but it did not form carbonic acid. The same solution was diluted still further and tried again, but failed entirely to give off gas, and it was not until we had used it many times that we were enabled to get a feeble effect, showing that most, if not all, of the germs were killed. Yeast was likewise smeared around the interior of a bell-glass containing air, and subjected to the fumes of the drug placed in a saucer beneath it, for periods varying from six minutes to twenty-four hours. That under the influence the shortest time suffered least, but all of the specimens, when mixed with sugar, sooner or later fermented. The majority were greatly delayed, and a few, where the contact was shortest, seemed to be accelerated, but as it is almost impossible to get the same number of active yeast plants in each tube, comparative results, except after many hundreds of experiments, conducted at the same time, are not to be relied upon. Another inverted jar, after being smeared on its interior with yeast, was placed over a saucer containing water, on which a small vessel floated, holding paraldehyde. By means of a rubber tube this jar was filled several times with air from the lungs, and the whole was then set aside for twelve hours. At the end of that time the yeast was mixed in tubes with grape sugar solution and allowed to act on it. No effect was produced for thirty hours, but shortly afterward traces of carbonic acid became visible, and gradually increased. Yeast was also placed in one end of an open glass tube, and paraldehyde in the other; through this the breath was taken for half an hour, so as to drive the paraldehyde vapor, and air from the lungs over it, and the yeast was finally put in grape sugar solution to test its activity. At the end of twenty-four hours a single bubble of gas showed that fermentation had begun, and five hours later it was fully established, the gas filling the tops of the inverted tubes. The object of these experiments was to imitate the condition of yeast in the trachea and lungs, and see what effect paraldehyde would have upon it there. Altogether, though not yet through with the investigation, the following conclusions seem warranted.

1. Strong paraldehyde either destroys entirely or greatly delays the fermentation of yeast.

2. Its activity seems to approach that of the substance (alcohol) from which it is derived, therefore less than 20 per cent. in a fluid will not entirely prevent fermentation.

3. A certain amount of time and contact is required, hence it is not quite so active in the gaseous as in the more concentrated liquid condition.

4. Ammonia is not given off from urine in which it is dissolved during five weeks.

5. It dissolves cholesterine and other constituents of gall-stones, but not so well as ether or boiling alcohol.

6. It hardens muscle lying in it or subjected to its vapor, even in the presence of water.

If paraldehyde acts in the system as it seems to do elsewhere, it is evident that, while in the body or being eliminated, that it must exert some influence upon the tissues or foreign living bodies which it touches, and if the contact be sufficient to kill or retard the development of certain kinds of bacteria or yeast plants, then such diseases as depend upon their presence ought to be modified or prevented. That bacterial diseases occur, is now generally admitted, and that modified yeast plant ones are also met with in man and animals, from analogy seems highly probable, but whether we shall call these effects diabetis, diphtheria,[1] phthisis in its earliest stage, embolism of

[1] I am not ignorant of the bacillus tuberculosis, but think that there may be an earlier stage, due to the overgrowth of cells, yeast plants, etc., as suggested by Salisbury, Cutter, Formad, and others.

the liver and kidneys from the small particles sticking in the capillaries and pores, giving rise to yellow atrophy and nephritis, of yellow fever in man, or pleuro-pneumonia in the lungs of cattle, must be left to the future. At present it will be well to cautiously try paraldehyde, both in the stomach and by inhalation, for pneumonia, bronchitis, hay fever, syphilis of the throat or nose, influenza, catarrh, and all spasmodic chest diseases, and if cholera, malaria, yellow fever, diphtheria, typhus, small-pox, scarlatina, measles, or any other contagium, enter the system through the stomach or air-passages, there is a possibility that this drug or certain modifications of it, when used promptly, may destroy, atrophy or change some of the specific germs locally, and thus prevent the full development of the disease. Do not think that I expect too much of this drug, or that it will render harmless or destroy all kinds of germs, for this is hardly possible, since each species thrives under special conditions of acidity or alkalinity, best suited to itself. But if it, or any germ excrement, will retard the growth of one single form in any given part of the body, so as to render the yeast plant nearer the size of a vinegar fungus, and the latter more like bacterium, or teach us to control germs by other germs, we shall be fortunate indeed. So far I have used paraldehyde in four cases of measles, that ran a very mild course, with scarcely any eruption, but as this may have been a coincidence, and not the effect of the medicine, we must wait for increased light. To obtain this, the drug should be studied, not only practically at the bedside, but systematically on living animals in connection with urea, cholesterine, leucithin, uric acid, bile, and the refuse products of the system, remembering that paraldehyde may do harm as well as good, and that it forms a modified link or part of a link in the great chain of fermentation and degradation products, that start from life and sugar, and go on through alcohol, acetic, lactic and butyric acids, to end in ammoniacal decomposition and death. Bearing in mind also that it is not as a general antiseptic that it will prove most useful, but as a local one, directed to a single or few parts of the economy, and liberated unchanged in a volatile form from the lungs. The importance of this latter information cannot be over-estimated, since the list of bodies that act there is small indeed, and the number of deaths from diseases of the lungs more than equal to those from any other cause. Not only as physicians and hygienists are we affected, but as eaters and men having dominion over the brutes, and I pity the person who can tranquilly see cattle stamp and look imploringly for aid, without a desire for something to break up germs in their lungs. Self-interest, therefore, as well as humanity, will sooner or later compel us to utilize all knowledge of fermentation, and the refuse products of the system, in a more complete manner than we have done heretofore, and not leave the best practical results of our laboratory work in the hands of the brewers, candy makers, picklers and old women.

An examination into the constituents of the canners and jelly-makers' trade, as well as the structure of our common garden fruits, shows that nature and art both throw up barriers against the entrance of minute organisms by the formation of a more condensed covering of the can or rind, and it is only when these are broken that fermentation takes place. The human body also, by its skin and membranes, performs the same function, and in disease, by the throwing out of lymph during inflammation, endeavors to limit it. Many of the white tissues also appear to be protected from breaking down too quickly by a minute quantity of that most insoluble substance, *cholesterine*, and this may be *its* greatest use in the economy. Hardening, therefore, the coagulation of albumen, deposit of fibrin, and such like processes, are the means used by nature to keep germs passive, and it is very interesting to note that nearly all of our powerful antiseptics act in a somewhat similar manner. Thus, the bi-chloride of mercury and carbolic acid both coagulate, while table salt, acetate of potash, glycerine and sugar draw water from the parts, and alcohol is a condenser of tissue used from time immemorial. If paraldehyde can be added to the list as a local hardener for certain internal parts of the body, or if its study as the modified excrement of alcohol, and relative of acetic acid, will lead to the use and discovery of other excrementitial substances to act on tissues or specific germs in different parts of the body, and thus produce either an excrementitial or restorative treatment of disease, it will be a boon indeed. What we need is *not only new*, or *more positive knowledge* of the *sizes* and *habits* of *germs*, but a better *appreciation* and *utilization* of the *facts already known*, and it is strange how blindly we grope with the light all about us. To give but one instance, look at the yeast-food sugar. Ever since man was formed it has gratified the palate of the eater, and yet, strange to say, as a therapeutic agent, except in combination with soap for boils, and to render medicines pleasant, it has been almost entirely ignored. This, also, is the substance that has been longest employed to prevent the products of the garden from spoiling, and every housekeeper knows that good preserves are kept by plenty of sugar. Were the profession asked which is the most powerful antiseptic, one would reply, corrosive sublimate, another carbolic acid, iodine, arsenic, or chromic acid, but I would say sugar, and why? Because it can be used internally, as often as we please, alone, or together with other substances, without poisoning or danger, and if this, combined with pleasantness, is not an advantage, I would like to know what is? I have to thank these reflections upon paraldehyde, and a Baltimore physician, for the stimulus that gave rise to the thought of the therapeutic importance of a large quantity of sugar. One night, in a society, it was stated that a mixture of quinine grs. xii, muriate tincture of iron ʒj, sugar water ʒiv, that had been recommended to cure diphtheria, had failed in two cases. The author, who was present, said the prescription had neither been compounded nor used exactly as he directed, but had been employed in too thin a solution, which would not stick to the throat, and that strong, simple syrup should have been the vehicle. This made me think that it was not the quinine and iron, after all, that had done most of the good, since they had disappointed us in so many cases, but the

thick, sugary solution, in combination with the muriatic acid, acting like the saccharine matter in the old lady's preserves, preventing fermentation and degradation. If such be the fact, it would be well to give the plain or acid sugar treatment a fair trial in external ulcers, affections of the vagina, bowels, and erosions of the uterus, as I have done, and thus ascertain the value of this harmless agent, that both *starts* and *stops fermentation* in accordance with the quantity present, and, learning from diabetis, use it internally for the prevention and cure of purpura and allied hæmorrhagic conditions where there is a want of coagulability of the blood. It would likewise be judicious, while searching for new causes of disease and strong agents to destroy them, to reflect upon the porosity of the body, and ask ourselves which are the more hurtful at any given time or place, dead or living germs, and how, when killed, are they to be removed without destruction of tissue.

If we coagulate, necrosis may ensue, and if nothing is done, a similar result from rapid growth will very likely follow. The fact that most of the zymotic diseases produce death through the liver and kidneys is a proof, if germs have anything to do with it, that very minute particles are clogging these smallest spaces in the human economy, and if they fill up pores of like capacity, they or their progeny must be of similar size. The uniformity of the effects also seems to show that the specific character of both rod-like and spiral bacteria does not consist so much in any poisonous quality, as in the fact that they are mechanically of the best form to cause a deposit of fibrin and fill up certain pores in Peyer's patches or elsewhere[1], and thus do harm. If this be so, anything that will enlarge, temporarily fill up, or contract pores, or cause germs to become sluggish, smaller or greater, through starvation or overfeeding, will be useful. Applying these principles to diphtheria, for example, we would not only give teaspoonful doses of thick sugar solution in combination with the muriated tincture of iron every half hour, day and night, to temporarily close pores, impede motions, starve bacteria and acidify the fauces, but paraldehyde and alcohol internally as strong as they can be borne, to act upon them in the lungs, trachea, and other parts that are harder to reach. We would thus determine clinically the value of thick syrup, acid and this drug, and be prepared to use or abandon as nature, when interrogated, directs. The trials that have hitherto been made in diphtheria, seem to indicate that sugar and muriated tinct. of iron, when freely used, prevent fetor, and paraldehyde appears to limit extension to the wind-pipe, but may do harm by increasing stupor when nephritis is present. More severe cases, however, must be treated, and many comparisons be made, before we can venture to give positive opinions of this drug, or answer the questions involved in such a subject as the starvation and keeping above hurtful germs by the employment of excrements that will not nourish or stable substances that they cannot readily pull down; but we have commenced, and that is something. If the fermentation of yeast and formation of aldehyde, joined with memories of the old lady's preserve jar, can help us continue, or suggest plain paths for others to follow, then the sweet things of our childhood will become preserves indeed, when they help to save a human life.

[1] This will explain why some persons take contagious diseases, and others with different sized pores do not. It also shows how when all the proper sized pores have been destroyed, second attacks of the same disease become impossible.

A CASE OF JAUNDICE WITH FATTY EXCRETIONS.

BY J. M. SWIFT, M.D., NORTHVILLE, MICH.

Mrs. B., aged 41; bilious temperament; subjected for some years to occasional attacks of jaundice; active habits; of medium stature, very obese, weighing 185 pounds; sterile, hyperæmic rather than anæmic, digestive function uniformly perfect, some little dyspnœa attendant upon active exercise, but general health has been usually good. Intellect is active, bright, vivacious, and always hopeful; avocation, house-wife, and peripatetic music teacher, both riding and walking a good deal. The lipogenesis is the only apparent indication of deficient oxidation.

This lady was taken with an "attack of jaundice," ten weeks ago, usual symptoms; constipation, clay-colored stools, nausea, slight headache, pain in the region of the liver and under shoulder-blades, itching of the skin, dizziness, and "faint-feeling." No fever, except an occasional slight pyrexia lasting for a few hours early in the attack. I was called to see her in the seventh week of the disease. Prescribed mercurials with rapid favorable results. Her husband informed me that she had passed "two pot-fuls of tar and dark coffee grounds!" I dismissed the case after two visits, which was then rapidly convalescing; natural stools; yellow tinge of skin and conjunctivæ disappearing. The patient was up and about the house, good appetite, and "felt all right." I left her March 22. April 5 was called again to see her. She had taken a severe cold, and also over-eaten, as I was informed and believe. All the previous symptoms were present, except no increase of temperature above 99½°, the pain and nausea not severe, but breathing a little difficult, and icterus very marked. Vegetable alteratives, podophyllin leptandrin, dandelion, etc., were resorted to, resulting in bilious stools, green in color, and copious. Mixed with these alvine excretions there were concretions as large as a large filbert, and of all sizes smaller down to a grain of rice, of what had every appearance of tallow.

Doubtless the aggregate of these in three days would weigh four to six ounces, and at this time there are small amounts occasionally passing her bowels. This fatty substance is unmixed with fæces, but has a greenish hue, and under the glass exhibits some cholesterine. No food containing fat has been taken for weeks by the patient. The clay or *putty* stools have given place to a more healthful appearance, though still green much of the time. The urine is loaded with bile, and floating upon the surface are innumer-

able oil globules, some of them very large. The secretion of the kidney is scanty, but not remarkably so.

The patient at this writing is comfortable, but not improving satisfactorily.

Is there anything peculiar in this case?

As would naturally be expected, the patient is much thinner now, but no unusual wasting is apparent. Appetite fair, temperature normal, and no acceleration of the pulse; patient also rests well.

MEDICAL PROGRESS.

MATERIA MEDICA AND THERAPEUTICS.

ON THE ABSORPTION OF NEUTRAL SALTS IN THE STOMACH.—Dr. W. Janorski (*Revue Médicale de Louvain*, and *Bulletin Général de Thérapeutique*) has made a series of experiments upon this subject and upon man, which led him to make the following report (*Zeitschrift für Biologie*):

1. The absorbent power of the human stomach is not the same for all salts; it varies according to the chemical composition of the saline substance which is employed.

2. The acid carbonates undergo the most rapid absorption, the chlorides the most feeble. The sulphates occupy a place between the two.

3. The difference in absorption is more pronounced the longer the solution remains in the stomach.

4. The presence of acids in the stomach increases the absorption (probably by the formation of acid salts) and makes more evident the difference in absorption which exists between the different salts. Carbonic acid is particularly active; on the contrary, an alkalinity of the contents of the stomach retards the change in the contents.

5. The presence of chloride of sodium in the gastric juice does not accelerate the digestion, nor increase the gastric juice; it exercises, on the contrary, a negative influence.

6. The quantity of hydrochloric acid which is secreted becomes greater in amount, according to the increased alkalinity of the saline solution, and to its longer stay in the stomach.

7. The introduction of distilled water into the stomach causes the secretion of an acid liquid (hydrochloric acid) which is the more marked in its acidity, according to the low temperature of the water so introduced.

8. When a salt undergoes chemical dissolution in the stomach, its basic and acid elements are not absorbed in accordance with their respective weights of combination.

9. One hour after the introduction of a pint of a saline solution into the stomach, a certain quantity of liquid still remains, which contains some of the salt; whilst in a half hour after the introduction of the same quantity of distilled water, the stomach contains no fluid.

From these observations, certain practical considerations are reached by Dr. Janorski, viz.:

1. It is most advantageous to administer salts in the form of acid carbonates, or with carbonic acid in excess; in fact, the absorption occurs more rapidly, the irritation of the mucous membrane is less, and the stomach empties itself most effectually. All the experiments of Dr. Janorski, with the aid of mineral waters, rich in CO^2, confirm this in every respect.

2. The introduction into the stomach of alkaline liquids diminishes the absorption of the salts and retards digestion, while producing a secretion that is greater in quantity than after the introduction of other solutions.

3. The introduction of acid substances into the stomach favors, on the contrary, the absorption of its contained matters. The use of acids, particularly of soda water and other acid drinks, seems therefore indicated, particularly in an overloaded stomach.

4. The presence of chloride of sodium in the stomach, does not seem, according to these experiments, to present that advantage for gastric digestion that has been attributed to it. This salt does not produce an increase of the secretion of the gastric juice, but rather of the peptones, and it does not contribute to a more rapid digestion. It is worth noting, however, in considering stomach digestion, that here the contents of the stomach are submitted for a longer time to the influence of the gastric juices, as the stomach empties itself slowly, and the antiseptic action of the chloride of sodium deserves to be taken into consideration in this connection. Whenever it seems advantageous to prolong the presence of a liquid in the stomach, and thus prolong its action upon the gastric mucous membrane, it would be useful to add a certain quantity of chloride of sodium to the liquid, or to render it alkaline; the mechanical functions of the stomach would probably be lessened, under these circumstances, which is an important point in cases of irritability of that organ. Inversely, the mechanical activity of the stomach is excited under the influence of acids. On account of this diminution of the mechanical functions of the stomach, is probably founded the property which certain drugs possess in quieting the pains of the stomach in certain cases of cardialgia, such as chalk, the carbonate of magnesia, of soda, and other carbonates and oxides.

5. The introduction of the chlorides in a neutral solution does not increase the gastric absorption, neither does the use of the neutral carbonates, which are either not absorbed at all, or absorbed only in proportion to their transformation into chlorides (in presence of the secreted hydrochloric acid). It is of importance to note that the chloride of iron is a salt which is absorbed with difficulty. When we consider, on the contrary, that the acid carbonates are of all salts the most easily assimilated, which is equally demonstrated in the acid carbonate of lime of the mineral waters, we must admit that the bicarbonate of iron should be the preparation of all

others of the salts of iron, which would be absorbed the most readily. This is confirmed by the fact that ferruginous waters, rich in carbonic acid, produce, in spite of their small proportion of iron, a greater therapeutic effect, which is more certain, than the pharmaceutical preparations that are given in much larger doses.

6. One hour after the introduction into the stomach of a pint of a saline solution, about a fourth part remains; if the liquid is pure or acidulated water, no traces remain ofter the same lapse of time. So that when we administer medicines in a liquid form, we can readily allow our patients to partake of food an hour later, without any fear that the drug will be diluted or chemically modified, so as to no longer exert its therapeutic effect.

On the Action of Salicylate of Soda Upon the Uterus. — Dr. Balette (*Bulletin Général de Therapeutique*) has found the salicylate of soda in ordinary therapeutic doses to quiet the pains of dysmenorrhœa, by exerting a sedative action upon the central nervous system.

It seems to increase the menses, and in some cases to cause their reappearance. In four cases, the use of salicylate of soda in large doses produced abortion—in two of the cases at the end of a day and a half, and in one case at the end of two months. (?) In five other observations, the drug in moderate doses produced no such result. Therefore, in many cases, the action of salicylate of soda in weak doses has no abortive effect upon the uterus. In his experiments upon animals, this drug had no oxytocic effect.

However, as there are women who are predisposed to abortion, and as experience shows that in large doses the drug has produced abortion, it would be wiser not to give the salicylate of soda in pregnancy, except in special cases, and then to determine with care the degree of tolerance as shown by the patient.

On the Use of Injections of Iodine (Intra-Venous); of Quinine (Intra-Venous); and of Fowler's Solution into the Spleen.—M. E. Ricklin (*Gazette Medicale de Paris*) has given a very interesting grouping of methods as above stated, used in accordance with what he calls parasiticide therapeutics, to bring parasiticide drugs in direct contact with the blood by means of intra-venous injections. He gives the results obtained by M. Vander Heyden in the treatment of certain infectious diseases by intravenous injections of iodine. The injections were made by the use of a Pravaz syringe. The solution consisted of 7 parts of distilled water, one part of iodine and 2 parts of iodide of sodium, which was injected into the median vein of the arm, which was distended by compression above the elbow joint. These injections were very well borne, but the therapeutic results were not remarkable.

M. Hoffman has been using intra-venous injections of chlorhydrate of quinine in cases of typhoid fever, erysipelas, pyæmia, pneumonia and pulmonary phthisis. The solution used for these injections consisted of alcohol at 450 holding in solution 1 grain of chlorhydrate of quinine for each cubic centimeter of the vehicle. The most minute precautions are necessary to render the injections inoffensive, which renders its use very troublesome, and not warranted by the results obtained. One case is cited of grave typhoid fever. On the fifteenth day of the disease, at 11 A. M., the temperature was 39.3.° In a half-hour a quantity of the solution equivalent to 2 gr. 1. of the salt was injected into a vein. At 12:45 P. M., the patient had a chill; the temperature had gone up to 41.5°. At 4:30 P. M., the temperature was 37.5°; at 9 P. M. it was 35.9°. The following morning it was 37°; in the evening it was 38.6°, and the next day the febrile movement had returned to its original intensity. This hazardous mode of medication never had more than a more or less passing antipyretic effect, which could be obtained by other means without exposing the patient to phlebitis, gangrene or embolism. Two of M. Hoffmann's patients were attacked by spasms after intra-venous injections, but they were not followed by any serious results.

M. Peiper records a case of leucæmia with enormous engorgement of the spleen. He was treated by injections of of Fowler's solution into the spleen, one cubic centimeter for each injection, and to the extent of ten injections during the course of eight weeks. They were well supported, and the spleen diminished markedly in size. Prof. Mosler, under whose direction this treatment was conducted, recommended that it be used only in cases of hard engorgement of the organ, and in cases that are not subject to the hæmorrhagic diathesis. Further to ensure success, the patient should first be submitted to the internal administration of medicines capable of acting upon the contractile tissues of the spleen, and each injection should be followed by the application of ice over the seat of puncture, to be kept up for several consecutive hours. It was undoubtedly owing to the want of these precautions that death occurred in the case in the service of Prof. Kussmaul, where sclerotinic acid was injected into the spleen, in consequence of the penetration of the liquid into the splenic vessels.

M. Ricklin concludes his review of the subject by referring to the experiences met with in injections of preparations of iron, but these have already been referred to in these pages.

OBSTETRICS AND GYNÆCOLOGY.

Rachidian Congestion of Menstrual Origin.—Mr. Oudiné (*Jour. de Med. et Chir.*) has added some observations upon several cases to the discussion on this subject. The rachidian congestion, according to his views, has ordinarily an abrupt beginning, like the cause which produces it. But there must be a distinction made between those rachidian congestions which occur in the adult female during the period of utero-ovarian activity, and those which occur during the menopause. With the first the phenomena occur abruptly as the consequence of sudden cold, fright, etc., with the suppression of the menses. Then follow, after a few hours, and more rarely a day or two, creeping sensations, pains and torpor,

with or without paralysis. With the second these symptoms come on more gradually, during three, four, five months, and longer, after the day when the subject ceased to be regular, and a feeling of discomfort sets in, with pain that is more or less intense at the period which should correspond to the normal menstrual flow. Then disturbances of motility set in, which develop little by little progressively, until the last stage, that of paraplegia. When this is reached it manifests itself most generally by interference with motility and sensibility, rachidian pains, and irradiations of pain in the extremities.

The disturbance of motility is seldom a true paraplegia, but more commonly a simple paresis, which is not permanent but in exceptional cases. It is more marked when the subject is up and about than when lying down, which is accounted for by the accumulation of the serum in the lower part of the canal and the pressure which it exerts upon the cord. The patients drag their legs one after the other, while the feet brush along the ground. The two legs may be affected in different degrees. The anal and vesical sphincters are rarely influenced in the exercise of their functions. The interference with sensibility is generally but little marked, and is shown by formications, and, more rarely, by anæsthesia. One case cited by M. Oudiné had lost completely all appreciation of the existence of the legs. The pains seated along the course of the spine are sometimes extremely intense, and may increase by very violent crises.

The progress of these symptoms is extremely variable. Some subjects exhibit abruptly all these symptoms, and, in the course of a few hours, they pass off. This is noticeable in young women when therapeutic interference has aided nature to restore the catamenial flow. But at the menopause, the symptoms may persist for a long time, for many weeks or even many months. Here the prognosis, which is always favorable in the first form, as relief is afforded during a period varying from several days to a few months, becomes graver. The cure is rarely effected, and the congestion may terminate in softening of the cord.

When it has been determined that the rachidian congestion is the cause of the paraplegia, which is not always easy, for the paraplegia of hysteria presents a marked analogy to this form of paralysis, the proper treatment is to resort to local blood-letting, such as wet cups to the lumbar region, leeches to the vulva to reëstablish the menses if possible, and to the various emmenagogues. M. Desnos prescribes ergot in powder, to the amount of 0.50 centigrammes to 1 gramme a day, with or without opium, according to the degree of tolerance of the patient, to diminish the congestion of the cord.

SURGERY.

HÆMATURIA IN THE RETENTION OF URINE, AND DISTENSION OF THE BLADDER.—Professor Guyon, in his clinic at the Hopital Necker, Paris (*Jour. Med. et de Chir.*), discusses fully the condition so frequently observed in old persons, with retention of urine, where a discharge of blood follows the evacuation of the bladder. He shows that in many of these cases the hæmorrhages are not due to traumatisms, but to an excessive congestion of the vesical mucous membrane.

In one case presented by him this condition was very remarkable; the patient, suffering from retention, had been relieved by the passage of a large sound, which produced a very rapid evacuation. The internal surface of the bladder was of an ecchymotic redness, but the mucous membrane itself was healthy. This vesical congestion is present in all similar cases, and suggests very clearly that, in treating retention of urine, the conditions of the vesicular circulation should not be abruptly disturbed by evacuating too rapidly all the liquid contained in the bladder, as one is always tempted to do. As a consequence of this rapid evacuation, syncope and sudden death have been recorded in very exceptional cases, but more commonly hæmorrhages result, the presence of which are explained by the marked abundance of the vesical venous plexus, which, suddenly relieved of pressure, distends itself forcibly.

The first rule, then, would be not to empty completely the bladder, and not to remove more than half of its contents. To do this properly, the bladder would be emptied slowly and by means of an instrument of small caliber, which would take from a quarter to a half-hour to do its work—that is, where the occurrence of hæmorrhage is to be feared. The accidents produced by this intense congestion may be very rapid and even mortal; at other times they are less grave, and their results may be noted as of all grades, from a cystitis to a pyelo-nephritis. In such cases the cystitis would not be produced by the transformation of the urine, it would depend upon the intense vesical congestion. This, however, would not militate against the use of antisepsis, for in old persons the alteration of the urine takes place very readily. Guyon washes his instruments with boracic acid, and oils them with phenic oil; after using the catheter he injects into the bladder about 150 grammes of a warm solution of boracic acid—4-100. This recognition of consecutive haematuria is very important, not only as regards treatment, but also in prognosis, as distinguishing an organic lesion from a simple disturbance of the circulation.

ON DISTENTION OF THE BLADDER.—In the normal state, the distension of the bladder produces an effect which soon becomes painful and even agonizing if it is prolonged, but it also produces a congestion which extends to the whole of the peri-vesical system. As a proof of this is the semi-erection of the penis which it causes in the old man. The whole venous system of that region, the prostate in particular, is in this congested condition under the influence of over-distension. Another point is that the bladder is but little sensitive to contact, while very sensitive to distension. This is shown very markedly in cases of lithotrity, while under the influence of chloroform. The bladder for a half-hour will support readily the contact of the necessary instruments used in the operation, but if it is distended by the injected fluids it commences to contract. The same thing is noticed in cases of stone. It is astonishing how indifferent the

bladder is to the presence of a stone. M. Guyon is of the opinion that most of those affected with stone in the bladder suffer no pain. It is only in cystitis that contact alone will cause contractions of the bladder.

These facts are important in operations upon the bladder for the removal of stone. If, for example, in such a case, after dilating the canal, and bringing instruments in contact with the bladder, an attempt is made to dilate the bladder by injections, there may suddenly occur serious accidents as the result of this distension. In a case of cystitis, it is natural to suppose that washing out the bladder would relieve the patient, but if the fact is overlooked that the slightest dilatation may result in very serious accidents, a considerable surgical fault is committed. These injections into a bladder which has already made great efforts to empty itself must increase the pain. Under such circumstances M. Guyon uses injections with great reserve, and with many precautions he considers it preferable to commence with *instillations* and gradually to arrive at injections.

Distension is the point of departure for a number of affections of the bladder. The number of cases of cystitis produced by the distention and the retention of urine is considerable, and in all patients where this disposition exists, one cannot be too emphatic in insisting upon urination without delay. The dilatation of old age is gradual, and very different from that of the young subject, where it is often caused by traumatism. This shows that by using very gradual means the bladder can be habituated to distension, and it is in these cases of chronic distension that one sees, as a consequence, the dilatation of all the urinary organs, the ureters, calices, pelves, which are permanent in their character and impossible to relieve.

NEW INVENTIONS.

The Bead Inhaler.—Dr. Benjamin Ward Richardson, in *The Asclepiad*, gives the illustration of an apparatus for inhalation which is shaped like an inkstand, with a neck and regulating cap, through which the liquid is poured into the receiver, and with a mouthpiece fitted inside with a talc inspiratory valve and with an expiratory valve. In the receiving bottle there is placed a string of glass beads, held on a line of cotton wick or floss silk. The beads fill the receiver, and form a free surface for the volatile fluid, without danger of the escape of the fluid except in the form of vapor during the inhalation, hence the name of *bead inhaler*. In changing one liquid for another nothing has to be done but to draw out the beads, to wash them, if necessary, in a little spirit, and, after washing the bottle, to replace them in the bottle. He claims for it the advantages of small size and easy portability, steadiness for standing on table at bedside, readiness for receiving and retaining the volatile fluid, possession of a wide surface for evaporation, easy adaptability to the mouth of the patient in any position, and cleanliness of action.

Ten minims of the nitrate of amyl poured upon the beads yields a charge which, by taking care that the cap closes securely and the tube valves acts correctly, will answer, without losing effect, for twelve hours.

Urethral Toxæmia.—This is a term used by Dr. Maclaren in an article in the *Edinburg Clinical and Pathological Journal*, to designate phenomena which have been classed under the head of gonorrhœal rheumatism, which latter term Dr. Maclaren considers a misnomer, as the phenomena are invariably associated with a specific inflammation of the urethra, and fulfil all the conditions of septic intoxication. He reports five cases in males under thirty-five years of age, in apparent good health up to the time of infection, and in only one example was there any history of previous rheumatic disease.

The systemous infection appeared in two cases on the third day, in two others on the eighth day, and in the remaining case about the third or fourth week after the onset of the gonorrhœal discharge (one case had suffered four years previous from a similar toxæmic attack. No prodroma, the first evidences being slight pain and considerable swelling in one or more joints or bursal sheaths. In four there was a metastatic form, involving a large series of great and small joints. In one it was limited entirely to the knee. There was no relation between the degree of pain and the amount of swelling. Severe persistent pain in one case at the acromio-clavicular articulation, and for nearly an inch over the bones on either side of the joint, indicated a participation of the periosteum in the morbid process. Slight transient redness sometimes was present at the onset, but on no occasion was there shown any tendency to suppuration. Groups of muscles were sometimes for several days extremely tender, and in one case the sclerotic and conjunctiva were injected and painful. Anæmia marked. Temperature never exceeded 103°. In all cases in the morning it frequently fell to 97°, and in one case reached 96°. Urine carefully examined, but no uric acid was found. Although in all the cases the severity of the symptoms was greatly mitigated in a few weeks, in none had they ceased to appear at the end of three months. Treatment simply emperical, viz.: injections of hyd. chlor 1–2,000, or acid carbolic 1–100, counter-irritation to upper part of thigh, rest, local application of flannel, plaster dressing. Tinct. iodine, sinapisms, and many anti-rheumatic remedies were tried, as the alkalies, pot. iod., quinine, colchicum, salicylate of soda, but these latter were without benefit. For the anæmia iron and ergot were given. The medical efficacy of the ergot was not decided.

It has been estimated by various writers that from 1 in 200 to 1 in 400 of individuals suffering from gonorrhœa become the subjects of urethral toxæmia.

For the removal of nævi in patients who shrink from the knife, Dr. Beatty has successfully employed liquor asenicalis, which he applies with a brush night and morning, until ulceration takes place.

THE

Journal of American Medical Association.

PUBLISHED WEEKLY.

THE EDITOR of this JOURNAL would be glad to receive any items of general interest in regard to local events, or matters that it is desirable to call to the attention of the profession. Letters written for publication or containing items of information, should be accompanied by the writer's full name and address, although not necessarily to be published. All communications in regard to editorial work should be addressed to the Editor.

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No. 65 RANDOLPH STREET,
CHICAGO, ILLINOIS.

SATURDAY, MAY 3, 1884.

WOMAN'S HOSPITAL MEDICAL COLLEGE OF CHICAGO.—Since our last week's issue, this institution has held its regular annual Commencement exercises in Hershey Hall, in the presence of a fair audience.

Twenty-seven young women received the degree of M.D., and were cordially welcomed into the ranks of the profession by Prof. W. H. Byford, President of the college. The institution is enjoying a fair degree of prosperity, and we are informed that a new college building will be erected during the present season.

LEGACIES TO HOSPITALS AND MEDICAL COLLEGES.—From the Cleveland daily papers we learn that the late H. B. Hurlbut, of that city, left provision in his will that the revenue yielded by his estate should go to his wife during her lifetime, and on her death $200,000 should be given to the Cleveland City Hospital, and the balance of the estate, estimated to amount to $1,000,000, to the establishment and maintenance of a gallery for the cultivation of art in that city.

The same papers announce that Mr. J. L. Woods has donated a liberal sum for the building of an elegant new edifice for the Medical Department of Western Reserve University, while Messrs. H. B. and Oliver Payne have added to the grounds for its accommodation.

Considering the direct and very important relation between the interests and welfare of all classes, and the highest standard of education and training of medical men, it is surprising that more attention has not been given, by men of wealth everywhere, to the endowment of medical colleges and hospitals on such terms as to secure the most systematic and thorough practical training of medical men, on whose attention and skill all must, at some time, depend for relief.

THE REJOINDERS.—As we expected, our remarks on the articles furnished by Drs. Hutchinson and Cronin, have elicited a letter from each in reply, which we cheerfully insert in this number of the JOURNAL. The first serve only to show what we had suspected, namely, that he had formed his estimate of the teaching in all medical colleges by that of the one he attended in the days when Druitt's Surgery was the most recent text-book. Regarding Dr. Cronin's letter we will only ask, if alcohol undergoes either assimilation or combustion in the human system, how does it happen that during its presence, not only the products of combustion, but the sum total of all eliminations, are diminished, and the temperature reduced, if changed in any direction? If the amount which it is claimed disappears in the system and not capable of being directly recovered in the excretions and eliminations, is actually either added to the tissues by assimilation, or oxidized as in combustion, how does it happen that M. Dupré finds something giving all the reactions of alcohol in the excretions several days after the use of the alcoholic liquids has been discontinued? Does not this fact go far to show that the alcohol which apparently disappears in the system is merely held mechanically by its strong affinity for the albuminous elements of the blood and tissues, and is only given up slowly through a period of several days? Finally, if the very general tendency of the human race to use alcohol in some form, is proof of its nutritive and sustaining qualities, how is it about tobacco, opium, etc.? Are they also foods?

SHUT ITS DOORS AND CLOSED ITS BLINDS.—The Joplin (Mo.) Medical College closed its doors before the end of its last college term. Cause—Inanition.

ARE PHYSICIANS ESSENTIALLY SANITARIANS?—In answering this question, the April number of *The Sanitarian* says: "Preventive medicine is at best only taught elementarily in a few medical colleges, and in these as an *addendum* to some other subject deemed to be more important—in *none* systematically as a prerequisite to graduation." This is not quite literally true.

Certainly, in the Chicago Medical College (and, we think, in some others also), there has been a dis-

tinct chair or professorship of State Medicine and Public Hygiene almost from the commencement of the College, occupied by a full professor, attendance upon whose teachings and examinations is as much a "prerequisite to graduation" as upon those of the professor of Practical Medicine or Surgery.

ILLINOIS STATE MEDICAL SOCIETY.—Our readers in Illinois should remember that the next meeting of the State Medical Society will be held in Chicago, commencing on the third Tuesday in May.

SOCIETY PROCEEDINGS.

FIFTY-FIRST ANNUAL MEETING OF THE TENNESSEE STATE MEDICAL SOCIETY, HELD AT CHATTANOOGA, TENN., APRIL 8 AND 9, 1884.

The Medical Society of the State of Tennessee met at the hall of the Iron and Coal Association in Chattanooga, at 11 A. M., Tuesday, April 9.

The Society was called to order by the President, Dr. A. B. Tadlock, of Knoxville. Prayer was offered by the Rev. J. W. Bachman.

The President appointed as a Committee on Credentials Dr. B. B. Lenoir, Dr. W. F. Glenn, Dr. D. D. Saunders.

The Committee retired to act on the names which had been handed in for membership.

Dr. W. F. Glenn being temporarily absent, Dr. W. F. Clary was appointed a member of the Committee *pro tem.*

Hon. Hugh Whiteside, Mayor of Chattanooga, on being introduced, extended a cordial greeting and a hearty welcome to the Society on the part of the city; stating that much good could be accomplished to the State by these meetings, and that he and the citizens of Chattanooga, whom he represented, sincerely hoped to make this a pleasant meeting socially, as well as to aid in its success in a business point of view. His address, though brief, was pointed and eloquent, and was received as a heartfelt, outspoken expression of generous hospitality.

The President returned the thanks of the Society to the Mayor for his cordial welcome, and said that the Society would gladly accept the courtesies of this city, whose people are so well known for their progressive spirit.

Dr. H. L. McReynolds, Vice-President of the Chattanooga Medical Society, and a member of the Committee of Arrangements, then delivered the following address on the part of the local profession:

Mr. President and Gentlemen of the Society:

With pleasure beyond my power to express, I welcome you to-day, not only in the name of our resident members, but in the name of the whole people of Chattanooga, to our thriving and progressive city.

A decade has passed since this Society last convened in Chattanooga, and if there be any here to-day who participated in that meeting in 1874, I doubt if they are able to realize the wonderful growth and advancement this city has made from the mere village then, to the splendid city she now is, and bids fair to attain in the near future. Not that the progress has been unrestrained by flood and pestilence, for she has been visited by both. But, notwithstanding these, on account of her superior railroad and water facilities, her immense beds of coal and iron ore, surrounded by fine farm and garden sites, she has defied adversity.

Six years ago this city was scourged with yellow fever, but, thanks to our noble profession, few lives were lost; and only last year and the year preceding we were visited by small-pox but again I say, thanks to the medical profession, that disease has ceased to be so much of a terror as formerly, having been deprived of its former power to destroy life through the discovery of the immortal Jenner. Notwithstanding all this, to-day our health statistics will compare favorably with any city in the Union.

That the medical profession has, within the last ten years, made more rapid advancement toward the goal of perfection; has investigated further into that most complicated of all machines—man; laid more peace-offerings at the feet of pain-racked and suffering humanity than any other decade preceding it, no one well informed in the history of medicine will deny. And we hope the time will soon come when no disease, however malignant, will be beyond the control of the skilled physician. But we can not hope, with any reasonable foundation for that hope, that the charlatan, with his wonderful pain-killer, discovered in the Wild West, shall ever cease to mount his dry-goods box on the corner; or that the ignorant of our population will ever cease to be gulled and deceived by every quack and pretender who travels through the country.

Hoping, Mr. President and gentlemen, that this meeting will be of great practical benefit to us all, and through us to the afflicted and suffering who have committed themselves to our care, and believing that an exchange of views and experience is the only true way to attain a thorough knowledge and a liberal view of any science, we the more heartily welcome you on this occasion. We welcome you in the name of the medical profession of this city; we welcome you in the name of the people of Chattanooga; we welcome you in the name of suffering humanity, and invite you to the hospitalities of our homes.

The Committee on Credentials then presented the following report of delegates and members in attendance:

Dr. J. Berrien Lindsley and Dr. P. D. Sims, delegates from the State Board of Health.

Dr. Ruth A. French, delegate from the Knox County Society.

Drs. D. D. Saunders and W. W. Taylor, delegates from the Shelby County Society.

G. A. Baxter, Chattanooga; C. C. Fite, Nashville; Jno. Blankenship, Maryville: E. B. Hale, Talbott; P. D. Sims, Chattanooga; A. B. Tadlock,

Knoxville; B. B. Lenoir, Lenoir's; W. F. Clary, Bellbuckle; V. Gibbs, Chattanooga; J. H. Vandeman, Chattanooga; W. G. Bogart, Sweetwater; A. J. Swaney, Castalian Springs; W. M. Vertrees, Nashville; H. Berlin, Chattanooga; W. T. Hope, Chattanooga; Mary T. Davis, Knoxville; W. F. Glenn, Nashville; M. Campbell, Nashville; Duncan Eve, Nashville; Deering J. Roberts, Nashville; J. L. Atlee, Athens; F. B. Sloan, Cowan; R. F. Evans, Shelbyville; W. R. Townsend, South Pittsburg; E. B. Hale, Chattanooga; S. T. Smith, Dunlap; T. J. Ried, Mason: L. Y. Green and C. S. Wight, Chattanooga.

The following were recommended for membership, and by unanimous vote, were elected:

Drs. W. Stewart, Rockwood; J. M. Masters, Knoxville; D. H. Lane, Calhoun; J. R. Nankivell, Charleston; W. T. Foute, Lenoirs; G. W. Drake, Chattanooga; D. E. Nelson, Chattanooga; S. T. Smith, Dunlap; E. B. Wise, Chattanooga; J. M. Lasiter, Dunlap; L. B. Dunn, Chattanooga; T. C. V. Barkley, Chattanooga; Green B. Garner, Hillsboro; J. B. Cox, Hollow Rock; Cooper Holtzclaw, J. R. Rathmell, W. H. Beatty, Chattanooga; W. S. Johnson, Morgantown; A. P. Vanderveer, Charles Spencer, Chattanooga; W. L. Stephens, Rockwood; H. H. Loveman, Chattanooga; R. E. Jameson, Apison; E. B. Ketcherside, Jasper.

Drs. J. W. Russey, Rising Fawn, Ga.; E. P. Nicholson, Valley Head, Ala., and D. A. Morse, Oxford, Ohio, a delegate from the Ohio State Medical Society, were extended, by unanimous vote, the privileges of the Society.

The President, Dr. A. B. Tadlock, then delivered his address, which was a lengthy and able paper. The general bearings of medicine and its relationship to the public, and the question of irregulars, and the correction of these evils, were elaborately treated.

The Society then adjourned to 2 P. M.

AFTERNOON SESSION.

The Society was called to order at 2 P. M. A letter and paper were received from Dr. C. E. Ristine, of Knoxville. The paper was entitled "Excitation of the Clitoris," and, on motion, was referred to the Committee on Publication.

By motion the President and Secretary were instructed to send greetings by telegram to the State Medical Association of Alabama, now in session at Selma, Alabama. Dr. Masters, of Knoxville, then read a paper on the Hygiene of the Eye. The paper was referred to the Publication Committee.

A telegram was received from Dr. J. F. Grant, of Nashville, regretting his inability to be present.

The Secretary, Dr. C. C. Fite, of Nashville, then read his report, which is as follows:

NASHVILLE, APRIL 7, 1884.

To the Medical Society of the State of Tennessee:

GENTLEMEN:—Please find attached to this report a statement in regard to the Transactions of 1883, which were well received and sought by the profession in various portions of the country. A catalogue of the books now in the Library of the State Board of Health is also appended. The Board opens their shelves as a depository for the property of the Society. Many valuable volumes have been lost on account of not having a permanent medical library in which to preserve them. The collection is in the bookcase C of the State Board of Health Library, in the State Capitol.

I had the honor of calling your attention last year to the number of travelling quacks in this State. Most of our sister States have, by requiring diplomas and by strict examinations, shut out this horde of vampires, and so they are fattening on our people.

We are maintaining our reputation for hospitality, and open wide our doors and welcome them. The profession is apparently glad to see them, for as a profession we give no word of warning. The daily press of our cities is profusely decorated with their pictures and glowing descriptions of their wonderful skill. Articles are published without being marked as advertisements, and the unwary take this as an editorial endorsement, and swarm like bees about their doors to be deceived and humbugged. I say to you, gentlemen, that we should blush when we read these disgusting laudatory articles penned by the charlatans themselves. We should blush that the proud old State of Tennessee allows them to thus degrade the honorable name of the doctors—that word second to none in the world, when a title of honor and well earned, is daily besmirched and bedraggled by the conscienceless villains. These are strong words, but true ones, as everyone knows.

Nashville has a fine assortment of these light-tongued gentry now plying their trade in our midst, and the profession is apparently indifferent to it.

It is our duty as philanthropists, as citizens of this commonwealth, to tell the people the plain unvarnished facts, and say that these men are unworthy of credit or respect. They voluntarily place themselves outside the bonds of honorable medicine.

We, as a profession, ask no protection; we ask no legislation in our behalf, but for the ignorant masses we should demand protection of our law-makers, and if we unite our efforts we can do it almost without serious opposition. It is true this Society has memorialized the Legislature time and again, but in a half-hearted way; it did not have the vim of determination in it, and we did not stand together. Instead of worrying ourselves about the New York code and such small matters, we should go home to the root of the evil, and make our great work of healing the sick and preventing disease what it really is—the noblest life on earth. This we can do by cleansing the temple of these loathsome worms that now degrade our honorable calling. Some present may be of the opinion that I overdo this. I say, gentlemen, it can not be overdone. There is no medium ground. No compromise can be made. We should state the truth or nothing, and I intend to keep this up until it is done, and I hope to live to see right triumphant. We must throw off the fetters of tradition, and look this living issue square in the face, and do our duty to our people and ourselves.

We are in the woods on this question. We are lagging behind, and as the other States take their position and drive these people out, we receive them, be-

coming the receptacle for the worthless and debased from all parts of this broad country.

Now, gentlemen, in closing, allow me to thank you for the honor you have conferred on me by electing me for three consecutive years your secretary. I am not a candidate for re-election, and would not accept a re-election if you saw fit to so honor me. My other professional duties are so great that it would be impossible to give the time and energy to the office that it requires. With sincere thanks for numberless courtesies, and with grateful appreciation for your confidence, I will retire from a work I love, and would like to continue were it possible to do so.

Faithfully yours,

C. C. FITE, M.D.

On motion of Dr. Lindsley, seconded by Dr. Roberts, the report was received and referred to the Committee on Publication.

Dr. D. D. Saunders, of Memphis, offered a motion to appoint a committee to memorialize the Legislature on the subject of suitable enactments to protect the public from quacks and charlatans.

Dr. Gibbs moved an amendment that the committee to be appointed prepare a bill, after comparison with all the laws on the subject that are obtainable, and that this bill, so prepared, be discussed at an adjourned meeting of the Society, to be held at Nashville, the first Tuesday in October.

Dr. Roberts seconded Dr. Gibbs' amendment, and the amendment was accepted by Dr. Saunders.

Quite a spirited discussson then ensued, which was opened by Dr. Saunders, who, in a pointed and eloquent manner, argued in behalf of action taken by the Society. We can not begin to give anything but a brief synopsis of his remarks, which were received with considerable applause by many of the members. He said, in substance:

Mr. President, the report of our Secretary gives me pain. Can it be possible that we are going to allow these men to disgrace us when we can prevent it? The older members are to blame. What can the younger members do when we, the older ones, are so selfish and indifferent? It is a shame and disgrace to us. Our neighboring States are enacting laws to prevent these vampires from committing frauds on the people. We have not done our duty. I say, gentlemen, we are wrong. Our Secretary made a similar report last year, and again like a trumpeter repeats it, and we should heed the voice.

Dr. Deering J. Roberts, in his remarks, was opposed to any legislative action whatever. He stated that where State laws were in force in regard to quacks and charlatans, the people were no better off than where the statutes were not so encumbered.

Dr. J. Berrien Lindsley spoke in favor of postponing action, and while he was in favor of better organization of the profession in Tennessee, he thought that the proper place to secure this was in the State, county and local societies. He was afraid to invoke legislative enactment.

Drs. P. D. Sims, A. J. Swaney, Duncan Eve, W. F. Glenn, Loveman, and others, participated in the discussion in behalf of immediate action.

Dr. H. Berlin gave some pertinent illustrations of the medical surveillance of Prussia.

Dr. Drake was opposed to legislation.

On motion, the amendment of Dr. Gibbs was laid on the table. Dr. Saunders' motion was then adopted after the amendment had been tabled.

Dr. Saunders moved that there be two members of the committee from East and West Tennessee, and three from Middle Tennessee.

Upon motion, it was decided that the committee report on the following day. The following committee was appointed by the President:

Drs. D. D. Saunders, W. W. Taylor, Memphis; Drs. J. H. Vandeman, H. L. McReynolds, Chattanooga; Dr. R. F. Evans, Shelbyville; Dr. W. F. Clary, Bellbuckle; Dr. J. F. Grant, Nashville.

Dr. Roberts, the Treasurer, then made his report, which was referred to an auditing committee, consisting of Drs. Lenoir, Vandeman and Hale.

The report of the Committee on Publication was then presented by Dr. Roberts, Chairman. The report was received and filed.

The Chairman of the Committee on Changes in the Constitution, Dr. S. F. Grant, not being present, the result of their deliberations was reported on by Dr. Roberts, and the amendments suggested were first considered separately, and adopted with but few, if any, material alterations, and then adopted as a whole.

The changes may be briefly summed up as follows: Abolishing the Censors and establishing in lieu a Judicial Council, composed of the ex-presidents of the society, three of whom constitute a quorum; fixing the time of meeting, when not otherwise ordered, for the second Tuesday in April; changing the assessment from $3.00 to $5.00 as an initiation fee for new members; $2.00 for members in attendance, and $1.00 for members not in attendance.

The society then adjourned until 9 o'clock next morning.

SECOND DAY.

The Society re-convened at 9 A. M., Wednesday, April 9, and was called to order by the President.

Dr. E. M. Eaton, of Chattanooga, presented a paper, "A Study of the Vital Statistics of Small-pox in Chattanooga in 1882-83." By request of the author, the paper was not read, but referred to the Publication Committee.

Dr. Mary T. Davis, of Knoxville, then read a valuable paper on "Hot Water Therapeutics," which was referred to the Committee on Publication.

Dr. Roberts moved that the ex-Presidents, Dr. R. F. Evans and Dr. B. B. Lenoir, personally tender the thanks of the Society to Dr. Davis for her admirable paper.

Dr. H. Berlin, of Chattanooga, then read a paper entitled "Efforts of Therapeutics." Referred to the Committee on Publication.

Dr. Roberts presented a patient of Dr. J. G. Sinclair, of Nashville, together with a brief clinical report of the case, one of a rare and unusual form of eye disease, with the regrets of Dr. Sinclair at being unavoidably prevented from being present.

Dr. R. F. Evans, of Shelbyville, then read an in-

teresting and practical paper on "Eczema," which was referred.

Dr. John Blankenship, of Maryville, then read a paper on "Scrofula." Referred to the Committee on Publication.

The Treasurer, Dr. Roberts, moved that the new constitution take effect after this meeting. Carried.

Dr. Rathmell, of Chattanooga, read a paper on "Hospital Gangrene, with Cases." The paper was referred to the Committee on Publication.

Dr. Swaney, of Castalian Springs, read a paper on "Puerperal Fever." By motion of Dr. Roberts, the paper was referred to the Committee on Publication.

Dr. Vertrees, of Nashville, asked that his paper be referred to the Committee on Publication, as he was too hoarse to read it. The request was granted, Dr. Vertrees giving a synopsis. The paper was on Diphtheria.

The Secretary read the report of the committee to settle with the Treasurer, the Treasurer's accounts being approved.

The following telegram was read, it was in answer to one sent by this Society:

SELMA, ALA.

"We thank you for your very kind greeting and consideration. Our meeting is a large one, and we earnestly hope that the Association over which you gentlemen preside, is in a growing and flourishing condition. T. A. MEANS,

Secretary of Alabama Medical Association.

A telegram from Dr. F. L. Sim, of Memphis, stating that personal illness alone prevented his being present, was read.

Dr. S. T. Hardison, of Lewisburg, read a paper on "Senile Prostatic Diseases."

Dr. Swaney discussed the treatment of the above conditions.

Dr. C. C. Fite requested that he be allowed to retire at one o'clock, as he had to go to Nashville on the first train, and Dr. Baxter was elected Secretary *pro tem.*

All the papers that were read proved very instructive, and provoked a very interesting discussion. They were able and interesting documents.

Drs. F. B. Ferguson, of Rich Creek, and S. T. Hardison, of Lewisburg, were present, and registered during the morning session. Drs. W. C. Ransom, of Farmington, A. B. Robinson, of Chapel Hill, and C. M. Drake, of Knoxville, having also arrived during the morning, and their application for membership having been favorably reported on by the committee, they were unanimously elected to membership.

Dr. T. J. Cotnam, of Stevenson, Ala., was present as a visitor, and invited to a seat in the Society.

The same courtesy was extended Dr. S. B. Wells, of Red Clay, Ga.

The Convention then adjourned until 2 P.M.

AFTERNOON SESSION.

Dr. G. A. Baxter, of Chattanooga, being called upon by the Society, read a paper on "Uncomplicated Spinal Shock," which was much commended by Dr. Saunders, of Memphis, and Dr. Vertrees, of Nashville, and referred to the Committee on Publication.

Dr. Glenn, being called upon for a paper, made an address upon "The McDade Treatment of Syphilis," affirming that in his own experience, it was a complete failure.

Dr. Saunders followed, confirming Dr. Glenn's conclusion.

Dr. Vertrees, Dr. Morse, Dr. Sims and Dr. Glenn participated in a spirited discussion upon the method and administration of mercury in this disease.

Dr. J. B. Lindsley, President of the State Board of Health, read the following communication from the State Board of Health upon the subject of "Vital Statistics:"

Mr. President:—By direction of the State Board of Health, my colleague, Dr. P. D. Sims, and myself have the honor of appearing before you as its representatives. We are charged with the pleasant duty of conveying to you the warm congratulations and hearty good wishes of an important State Board, which owes its existence to the long continued and well directed efforts of your body, and which recognizes the fact that without the cordial and active assistance of the medical profession of Tennessee, its brilliant prospects for high usefulness will prove a mere mirage of the desert.

Indulge me in a brief historic retrospect. At Chattanooga, in 1874, a committee was appointed to draw up a report upon a new constitution, looking to new life and energy in the Society, which had not been keeping step with other intellectual influences in the State. In the Transactions for 1875 we find a very elaborate paper from this committee, in which the advancement of preventive medicine was announced as one of the four great objects to which this association should devote its energies. On page 26 of these (1875) Transactions we learn that at the previous meeting (1874) a committee had been appointed to memorialize the State Legislature to create a State Board of Health. This committee reported through their chairman, Dr. E. M. Wight, that they had drawn a bill covering the wishes of the Society, and had presented the same to the General Assembly for its enactment, but which, they were sorry to say, had failed in its passage to become a law. The Society then adopted the followino:

Resolved, That the chairman, Dr. E. M. Wight, be requested to write carefully the report of the committee on a State Board of Health, for the proposed report of the proceedings of the Society, and that the committee be continued. This eloquent address may be found on pages 42–48 of said Transactions.

At the next session, 1876, we find that the committee on the State Board of Health, through Dr. Wight, presented an exhaustive and lengthy report. This able and elaborate paper fills ten closely printed pages of the Transactions for that year.

On pages 34–36 of the Transactions for the year 1877, we find the report of the committee on State Board of Health, by W. K. Bowling, chairman. We quote from it the result of the above stated patient efforts:

"The State Board of Health of the State of Ten-

nessee is now a finality. We have the Board organized and at work. It has only come into existence because the State Medical Society demanded it. It is your legitimate offspring. We charge you now with its future care, and appeal to you to give it every aid, and the best support in your power."

It is proper to add, that all this time, Dr. J. D. Plunket was Treasurer of the Society, and took a very active part in enlightening the members of the Legislature, and the public, as to the merits of the measure. Hence, in April, 1879, when the board was created, Drs. Plunket and Wight were among the original members, and the former became the first President of the board. Dr. Wight, to the day of his death, was one of its most disinterested and active workers.

The history of the board since then is familiar to the profession. It has made progress. It has retrograded. The great subject of vital statistics must be tackled again and again until a satisfactory law is obtained. Continuous and costly efforts must be made to enlighten the people of Tennessee, until in matters of public health, this, the University State of the South, takes its place alongside Massachusetts and Michigan, as preëminently an exemplar.

Dr. Hope then offered the following motion:

"*Resolved*, That the President appoint a committee of five on the State Board of Health, whose special duty it shall be to aid in the passage by the next General Assembly, of a satisfactory law upon vital statistics." Carried.

Dr. P. D. Sims, of Chattanooga, in an eloquent eulogium, called upon the Society to contribute to the fund for a monument to Dr. J. Marion Sims. This was seconded with enthusiasm by Dr. Saunders. Action was deferred to the night session.

ELECTION OF OFFICERS.

Dr. Hope nominated Dr. D. D. Saunders, of Memphis, for President. Dr. Roberts seconded the nomination, and requested that Dr. Davis be empowered to cast the vote of the Society for Dr. Saunders, which was done, and he was declared unanimously elected. He accepted in an appropriate and eloquent address.

Dr. A. J. Swaney, of Middle Tennessee, Dr. W. T. Hope, of East Tennessee, and Dr. T. J. Reid, of West Tennessee, were elected Vice-Presidents.

A motion to proceed to the election of a Secretary was laid upon the table, as the Society was well pleased with its present Secretary, Dr. Fite, and therefore declined to accept his refusal to serve another term.

Dr. Deering J. Roberts was re-elected Treasurer.

The Society then adjourned to take an excursion in the city and to re-assemble for business at 8 P. M.

At 4 P. M. the delegates adjourned to the Union Depot, and by invitation boarded a special train which had been provided for their use. They visited all the leading industries of the city, including the South Tredegar Iron and Nail Works, Lookout Rolling Mill, and the new Citico Furnace, and each and every one expressed surprise and amazement at the extent and variety of the industrial progress of Chattanooga.

NIGHT SESSION.

The Society was called to order by the President at 8 P. M.

The committee on memorial to the Legislature made a report, of which the following is a copy:

To the Honorable Legislature of the State of Tennessee:—We, a committee appointed by the Tennessee Medical Society at its last meeting at Chattanooga, on April 8, 1884, beg leave to state that from our personal knowledge, the people of this State, which you have the honor to represent, are being imposed upon in body and person, and in many instances permanently injured in health, and even killed, by ignorant and unauthorized persons who call themselves doctors, and who have no diplomas from recognized medical schools, or certificates from authorized medical boards. We deem it our duty to make you conversant with these facts, that you may, as the regular and proper guardians of the peace, happiness, and lives of the people, take such legislative action as may protect your people from this source. So far as the regular profession of medicine is concerned, we wish you to understand that we ask your action not for ourselves, but in behalf of your own people, leaving us to take care of ourselves, which we claim to be able to do.

We would most respectfully suggest in the accomplishment of the above object, that you may partially effect it by passing an act which prohibits the collection of medical fees by any other than a legalized physician.

D. D. SAUNDERS,
J. H. VANDEMAN,
R. F. EVANS,
W. F. CLARY,
W. W. TAYLOR,
H. L. MCREYNOLDS,
J. F. GRANT,
Committee.

On motion, the report of the committee was received, and the committee continued.

The following committee was appointed on Vital Statistics at the request of the State Board of Health:

W. T. Hope, Chattanooga; F. L. Sims, Memphis; R. Cheatham, Nashville; J. B. Murfree, Murfreesboro; J. B. W. Nowlan, Nashville, chairman.

The Judicial Council reported that the name of Dr. R. J. Hoyle, of Farmington, Tenn., be dropped from the roll of membership on account of irregular practices. Dr. Hoyle was expelled, and the Secretary instructed to notify him of the fact.

Dr. W. W. Taylor introduced the following resolution, which was carried:

Resolved, That a committee be appointed on county medical organization, to consist of not less than three members, one from each section of the State.

Dr. H. L. McReynolds, Chattanooga; A. H. Swaney, Castalian Springs, and W. W. Taylor, Chairman, Memphis, were appointed.

The following resolutions were then made and carried:

By Dr. P. D. Sims—That the Tennessee State Medical Society appropriate to the Marion Sims

Monumental Fund the sum of $50, and that the Treasurer of the Society be, and is hereby instructed, to forward from the fund of the Society this amount to Dr. Maury, of Memphis, the custodian of said fund in Tennessee.

By Dr. Townsend—That all members who propose to read papers at the annual meetings of the State Medical Society, inform the Secretary of the Society of the title of their papers, previous to the meeting, and that the Secretary issue a list of such papers in his call for the annual meeting.

By Dr. Gibbs—That the Committee on Arrangements be requested to make arrangements for a three days' meeting at the next regular meeting.

By Dr. W. W. Taylor—That the thanks of this Society are due, and are hereby tendered the city papers, for the very full reports furnished of our proceedings.

By Dr. Tadlock—That thanks be extended to the N., C. & St. L., and other railroads, for excursion rates; also thanks to the Medical Society of Chattanooga, for their work in the meeting.

By Dr. Masters—That a vote of thanks be extended to Dr. J. H. Vandeman for the royal manner in which he entertained the members of the Society on last evening.

By Dr. Vertrees—Anybody who has done anything for the Tennessee State Medical Society, and who has not been thanked, receive the thanks of the Association.

By Dr. Vandeman—That the thanks of this Society are due, and are hereby tendered to Dr. A. B. Tadlock, for the zeal and impartiality with which he has presided over our deliberations during this session.

The following committees were appointed by the President:

Delegates to the American Medical Association—Drs. Duncan Eve, Nashville; W. F. Glenn, Nashville; C. C. Fite, Nashville; J. B. Lindsley, Nashville; R. A. Hardin, Savannah; W. A. H. Coop, Friendship; J. G. Sinclair, Nashville; G. B. Thornton, Memphis; D. D. Saunders, Memphis; A. J. Swaney, Castalian Springs; R. F. Evans, Shelbyville; W. T. Briggs, Nashville; W. R. Townsend, South Pittsburg; W. M. Vertrees, Nashville; A. B. Tadlock, Knoxville; J. H. Vandeman, Chattanooga; H. Berlin, Chattanooga; G. A. Baxter, Chattanooga; W. G. Bogart, Sweetwater; H. H. Loveman, Chattanooga; and Deering J. Roberts, Nashville.

Committee of Arrangements—Drs. W. F. Glenn, chairman, Nashville; A. Morrison, J. W. Maddin, J. R. Buist, N. D. Richardson, Nashville.

Committee of Necrology—Drs. Thos. Lipscomb, Shelbyville; Thos. Menees, Nashville; P. D. Sims, Chattanooga; R. W. Mitchell, Memphis; J. M. Boyd, Knoxville.

Committee on Credentials—Drs. J. B. Lindsley, Nashville; G. B. Thornton, Memphis; A. B. Tadlock, Knoxville.

Committee on Business—Drs. V. Gibbs, E. M. Eaton, Chattanooga; S. B. Boyd, Knoxville; F. Bogart, Sweetwater; J. B. Murfree, Murfreesboro.

Committee of Publication—Deering J. Roberts, T. A. Atchison, C. S. Briggs, Nashville; W. W. Taylor, Memphis; C. C. Fite, Nashville.

The Society adjourned to meet on the second Tuesday in April, at Nashville.

SOCIAL FEATURES OF THE MEETING.

The reception on the evening of the 8th, at the handsome residence of one of the Society's former presidents, Dr. J. H. Vandeman, corner of Fifth and Chestnut streets, was a pleasant event.

The banquet given by the citizens of Chattanooga, at the hall of the Iron and Coal Association, on the evening of the 9th, after the adjournment of the Society, was a sumptuous feast, and heartily enjoyed.

The toasts on the occasion were apropos, and developed a raciness of wit and an eloquence that gave a glorious finale to a most successful meeting.

STATE MEDICINE.

REPORT OF PROCEEDINGS OF THE ILLINOIS STATE BOARD OF HEALTH.

The regular quarterly meeting of the Illinois State Board of Health was held in Chicago, at the Grand Pacific Hotel, on Thursday and Friday, April 17 and 18, 1884. Present—Newton Bateman, presiding; W. A. Haskell, A. L. Clark, R. Ludlam, W. R. McKenzie, John H. Rauch. The President called the Board to order Thursday at 10.30 A. M. The minutes of the previous meeting, January 17, were read and approved. Under the call for reports from officers, the Secretary presented the following quarterly report:

QUARTERLY REPORT OF THE SECRETARY, JAN 1—MARCH 31, 1884.

During the quarter ended March 31, 1884, there were received in the Secretary's office 615 communications, letters, reports, etc., exclusive of 183 diplomas submitted for verification, and the affidavits and other papers accompanying applications for certificates in nearly 200 cases. There were sent out, during the same period, 760 letters, postals, circulars, etc., and other communications, and the usual quantity of the Board's publications—reports, registers, preventable disease circulars, etc., of which 227 packages were sent by express. Eighty telegrams were received and one hundred and twenty-two sent.

Certificates, entitling to practice medicine and surgery under the Medical Practice Act, were issued to 152 graduates upon diplomas from legally chartered medical institutions in good standing.

Among these were a number issued to practitioners previously holding the certificates of the Board, issued after examination. There are now not to exceed 50 practitioners of this class in the State, who have not since graduated from a medical college, in accordance with the recommendations of the Board. To midwives, 12 certificates have been issued—6 upon diplomas or other recognized credentials, and

6 upon examination. There were, in all, 12 examined during the quarter, of whom 6 were rejected.

The Diplomas of 1883-84.

Applications based upon the diplomas issued at the close of the last session have been received from graduates of eleven different colleges, which have either failed to fully comply with the Schedule of Minimum Requirements of the Board, or against which charges have been received that such compliance has been perfunctory and insincere.

In eight of the cases where the colleges have failed to fully comply with the schedule, the applicants have signified their intention—in response to a suggestion to that effect—of submitting themselves to an examination by the Board on those subjects omitted by their respective schools.

They will present themselves at this meeting, and I recommend the adoption of this course with regard to the diplomas of that class of colleges.

During the month of March I spent two weeks visiting Eastern colleges, with reference to this matter, and was much gratified at the spirit manifested concerning the Board's efforts to improve the status of medical education, especially from the better class of colleges.

I regret not being able to devote more time to these personal visits. They are much more satisfactory and profitable than anything which can be accomplished by correspondence.

On the whole, there is every reason for encouragement in the results of the work thus far. One of the most satisfactory proofs of the timeliness and wisdom of the Board's action is found in the attitude of the graduates themselves. Expressions of approval from a very large number, and, as already stated, of a willingness to submit to an examination by the Board from others have been received.

PREVALENT DISEASES.

Small-pox has reappeared at a few points in the State, viz.: at Chicago—two cases—one from Cincinnati and one from Indianapolis; at Cairo and East St. Louis, several cases from the river; at Charlestown, Coles county, a tramp, said to be from the pineries of Wisconsin, or Michigan; at Coulterville, Randolph county, five cases among negroes, contracted from a negro roustabout. At the close of the quarter, an outbreak is also reported at Yorkville, Kendall county.

In all these cases (except Chicago) the rules and regulations of the Board, and necessary advice and instructions, printed and written, were at once furnished. These are now so well understood, and the community generally is so well protected by recent vaccination and revaccination, that there is no spread of the disease beyond the first case. Some sensational statements were made about the cases at Cairo, but investigation proved them to be unfounded.

Scarlet fever has been reported from a few localities, but not to such an extent as to warrant special mention.

THE CATTLE DISEASE.

On the 13th of March, the Board was appealed to by the State Board of Agriculture concerning information received that foot-and-mouth disease (epizootic aphtha) existed among cattle in Effingham county. Coupled with the reports of its existence in Kansas and elsewhere, the information demanded the most serious attention. Its highly contagious character, the rapidity of its spread, and the difficulty of eradicating the contagion, combine to render it one of the most dreaded of all the animal plagues, from an economic standpoint. It is estimated that the direct money loss from this disease to English stock-raisers in 1872 exceeded $65,000,000, and the average annual loss in France is computed at 5,000,000 francs for twenty successive years.

There is no legislation in this State concerning the disease, beyond the authority conferred upon the State Veterinarian to investigate contagious and infectious diseases among animals. But the power to condemn infected animals, to quarantine, or enforce otoer measures for the arrest of such diseases, and to prevent their spread, is limited specifically to pleuropneumonia or glanders.

In this emergency, it was evident that, if the disease really existed, it could only be dealt with through the State Board of Health by virtue of the powers and authority vested in it by the second section of the act of May 25, 1877. Steps were, therefore, taken to ascertain the foundation for the reports; the State Veterinarian was dispatched by the Governor to Effingham county, and subsequently to a number of other points.

Professors Morrow and Prentice also visited herds in various localities, said to be infected.

Meanwhile, I had consulted with Dr. E. P. Salmon, the chief veterinarian of the Department of Agriculture at Washington, and had carefully studied and compared all the reports of the disease from the several localities, and finally arrived at the conclusion—subsequently confirmed by the veterinary experts—that the disease existing in Illinois, Iowa, Missouri, Kansas, and Nebraska, was not foot-and-mouth disease.

SANITARY COUNCIL.

The sixth annual meeting of the Sanitary Council of the Mississippi Valley was held in Memphis, Tenn., on the 21st of March. Beyond the reception of the reports of officers and committees and the transaction of the usual routine business, nothing of importance was attempted. The object of the meeting was merely to keep the organization in readiness for action should an emergency arise requiring its intervention. A resolution was adopted, thanking the Executive Committee for its labors during the season of 1883, approving its course and instructing it to adopt, if necessary, the same line of action in regard to the prevention of the introduction of yellow-fever, or other infectious disease, into the Mississippi Valley during the year 1884.

Recent changes in the personnel of some of the most important sanitary organizations originally represented in the Council, are cause for congratulation, and for the first time in many years there is now

good reason to believe that all Boards of Health, State and local, in the Valley, will act as a unit.

Respectfully submitted,

JOHN H. RAUCH, Sec.

On motion of Dr. Clark, at the conclusion of the reading, the report was accepted and ordered placed on file.

The Secretary made an informal supplementary statement regarding his action on applications for certificates, based on the diplomas of the session of 1883–84. On motion of Dr. McKenzie, the action of the Secretary was approved.

Fifteen candidates presented themselves for examination, among them being six graduates of colleges which had not fully complied with the Board's schedule, and whom it was proposed to examine only on the subjects omitted, namely, preliminary education and hygiene.

At 11 o'clock, on motion of Dr. Clark, the Board went into executive session for the examination of sundry cases concerning colleges and individuals, representatives of three colleges being in attendance, and desirous of a speedy hearing.

At 1 o'clock, P. M., the Board took an hour's recess for dinner, and at 3 o'clock, after having transacted sundry routine business, the executive session was resumed and continued until 6 o'clock, when the session was adjourned to Friday morning.

FRIDAY, APRIL 18, 9:30 A. M.

The Board met, pursuant to adjournment, present as before. The Secretary presented the correspondence and other papers in a large number of cases, which occupied the attention of the Board during the remaining hours of the session.

The Secretary was authorized to attend the proposed conference of representatives of State Boards of Health, to be held in Washington, D. C., during the meeting of the American Medical Association.

In the case of Dr. W. W. Bower, of Mt. Sterling, Brown County, charged with being identified with the "American Anthropological University of St. Louis," the Secretary was instructed to forward Dr. Bower's denial and explanation to the Hon. John Eaton, Commissioner of Education, by whom the charge was laid before the Board, and to request of General Eaton that he forward any evidence in his possession, tending to prove that said Bower was concerned in the sale of the diplomas of the so-called university.

The Auditing Committee reported that it had examined and approved of bills for the current quarter, amounting to $2,664.80, and recommended that the same be paid.

The Secretary reported that only two of the candidates who had undergone the full examination, had attained the required percentages entitling them to pass, and that both of these were men who already held diplomas from medical colleges.

At 8 o'clock, P. M., the Board adjourned.

THE Missouri State Medical Society adjourned to meet in Sedalia, Mo., May 13th, 1884. The *Medical Review* says the date has been changed to the 20th by order of the President.

BOOK REVIEWS.

A TREATISE ON PHARMACY: Designed as a Text-Book for the Student, and as a Guide for the Physician and Pharmacist, containing the Officinal and many Unofficinal Formulas, and numerous Extemporaneous Prescriptions. By EDWARD PARRISH, late Professor of Theory and Practice of Pharmacy in the Philadelphia College of Pharmacy, etc. Fifth edition, enlarged and thoroughly revised, by Thos. S. Wiegand. With 256 Illustrations.

This work has long been indispensable to the practical pharmacist, as well as the student of pharmacy, and is a valuable reference book for the physician. This new edition, the fifth, has been rendered necessary, not alone by the progress of science, but also by the late revision of the U. S. Pharmacopœia. All the new preparations of the pharmacopœia have been embodied in the work, together with all essential tests, and the improved system of weights and measures. The syllabi, which have proved such a valuable features of previous editions, and upon which Prof. Maisch bestowed so much care, are retained in this edition.

The first five chapters of this treatise are devoted to subjects introducing to a study of pharmaceutical processes proper. The first two chapters appropriately treat of the proper arrangement of a dispensing store and laboratory. The chapters devoted to pharmaceutical chemistry and Galenical pharmacy embrace the technique of the science of pharmacy. The portion of this treatise in which physicians will be most interested, is part VII, entitled, extemporaneous pharmacy. This part treats of prescriptions and the art of selecting and combining remedies. The appendix to this part treats of the management of a sick chamber; the preparations used as articles of diet for the sick; physicians' outfits; and some recipes of important popular remedies. While the suggestions, intended for the laity, upon the management of the sick chamber, are most excellent, we are at a loss to understand the reasons which determined the editor's choice of such subjects for consideration in a text-book on pharmacy. While directions for the preparation of arrow-root, tapioca, and beef-essence find an appropriate place in such a treatise, one is at a loss to find the relevancy of directions for deportment around the dying-bed upon the preceding page. The chapter on Elixirs is both interesting and instructive, and contains some new formulæ of much popularity. This book is amply illustrated, and the paper, printing and binding, are expressive of the best modern typography. Indeed, the mechanical execution of the book is faultless.

A DISCONSOLATE looking doctor on meeting a Hibernian friend attributed his sorrow to the fact that he had just returned from his vacation and found his wife in bed with cerebro-spinal-meningitis. "Holy Moses," says Pat, "and why didn't yees shoot the Oitalian scoundrel?"—*Medical Age.*

FOREIGN CORRESPONDENCE.

PARIS, APRIL 4, 1884.

Dr. Debove, one of Professor Seé's most zealous disciples, has implicit faith in the bacillary theory of tuberculosis as propounded by Professor Koch, of Berlin. During the summer session of last year, Dr. Debove was appointed, on the death of Professor Lasèque, to fill, *pro tem*, the chair of Clinical Medicine at "La Pitie" hospital, when he delivered a series of lectures, by which he endeavored to demonstrate the parasitic origin of pulmonary tuberculosis, and the conclusions to be derived therefrom as regards the ætiology, diagnosis, and treatment of this affection. According to Dr. Debove, the bacillus is the characteristic element of the tubercle, which definitively settles the question as to the unity of phthisis; moreover, as this same bacillus is found in the greater part of the lesions which have up till now been put down for scrofulous, it follows that the term scrofula should be expunged from the nosological table as it exists in the standard works of the day. The contagiousness of pulmonary phthisis, which has been admitted for some time, has become a fact intimately associated with the parasitic doctrine, without our being able to define precisely the means by which the parasite enters the body, nor the individual organic modifications, hereditary or acquired, which favor or check its development. And yet it is these modifications that it would be necessary to know exactly in order to establish in a rational manner the prophylactic treatment of phthisis. As regards curative treatment, Dr. Debove has not much confidence in the utility of drugs, nor yet in the climatic treatment of the disease, his sheet anchor being hyperalimentation, or, more properly speaking, artificial feeding.

Dr. Debove was led to adopt this method of treatment on the grounds that anorexia was not so frequently as has been represented, an initial symptom of tuberculosis; but, on the contrary, it is anorexia that frequently leads to phthisis. He therefore asks that whether in suppressing the cause, the effects will not be also suppressed, and whether, in consequence, by an abundant alimentation, the progress of the affection would not be checked. This he proposed to effect by feeding the patient by means of a soft India rubber tube, with a funnel attached to the superior extremity. But as nitrogenous material would constitute the principal element in the diet of phthisical patients, it would be necessary to compose a mixture that would pass easily through the tube, and be as digestible as possible. With this view, a mixture composed of milk, or beef tea and raw eggs, including the white and yellow parts, to which may be added some raw meat finely chopped up, or better still, powdered meat. Dr. Debove commences by administering a mixture composed as follows: 25 grammes of powdered meat, 1 egg, and ½ a litre of milk or beef-tea, which he gradually increases to 3 litres of milk or beef-tea, or 6 to 12 eggs, and 300 grammes of powdered meat in 3 meals. He recommends that not more than 1 litre should be introduced into the stomach at a time. He considers the washing out of the stomach unnecessary, and abstains from every other form of medication, excluding even cod-liver oil. In case of severe diarrhœa, however, he administered bismuth and opium.

Dr. Debove adopts this method in all the stages of the disease, that is, of pulmonary tuberculosis, and in all the cases in which he has succeeded in feeding the patient in the manner above described, he noticed a series of phenomena which were constantly produced: the vomiting ceased, digestion was perfectly performed, the sweats disappeared, the dyspnœa was relieved, the strength returned, the evening fever abated, the cough and expectoration were diminished, and the weight of the patient increased. One circumstance was particularly noticed, that is, the vomiting of the alimentary substances introduced by the tube was altogether exceptional, and when the patient had been troubled with repeated and obstinate vomiting, excited by paroxysms of coughing, the vomiting was checked, the diarrhœa ceased, and the appetite returned. This method of treatment should be continued for some time, and after it has been considered necessary to stop it, the patient should continue to feed himself with powdered meat, about 100 grammes in one meal, for some months longer, and in addition to his other repasts. But notwithstanding the favorable results obtained by this method of hyperalimentation, the prognosis of the cases so treated by Dr. Debove and others in this way does not seem to be more promising than that of those treated by the ordinary methods, as Dr. Debove himself asserts that one cannot hope to guarantee a tuberculous subject, when once cured, against a subsequent attack. All that one can do is, to check the progress of the present attack, and thus permit the lesions to cicatrize.

The contra-indications of this method of treatment are: the greatly advanced lesions, for one cannot hope to do much with a patient whose intestines are affected with extensive ulcerations which are manifested by an obstinate diarrhœa of long standing. As for the state of the lungs, this is less a question of degree than one of extensiveness. In a patient whose lungs are studded with tubercles, one can only hope to prolong his existence by a little. In the acute forms of the malady, the method is powerless. The same is the case when there is high and continued fever, indicating the progressive course of the lesions. The treatment is more successful with chronic cases. The earlier the remedy is applied, that is to say, at the commencement of the first manifestation of the malady, the cure would be more hopeful and rapid than if adopted at a later stage.

Encouraged by the success obtained by this method of treatment, Dr. Debove was induced to apply it to other cases of anorexia and cachexia, and with satisfactory results. Judging by analogy, the author considered that the method might with advantage be employed in chronic cases of pneumonia and hysterical subjects who frequently refuse all food, or if any is taken, it is vomited up. Dr. Debove considers that in certain affections of the stomach, albuminuria, and in chronic dysentery, where milk may not be

well borne, the powder of milk administered in this way will render great service. In certain surgical affections also, in which the surgeon may hesitate to operate owing to the debilitated condition of the patient, this method of hyperalimentation, or artificial feeding, will be found highly serviceable.

A. B.

DOMESTIC CORRESPONDENCE.

ACTION OF ALCOHOL.

TO THE EDITOR:—

In the last issue of your valuable journal, a somewhat brief synopsis of a clinical lecture delivered by me, served as the basis of an editorial notice, that, though accepted by me with all the meekness that should characterize the bearing of a junior hearkening to the voice of a "father in Israel," bears within it a few elements of error.

In speaking of the combustible power of alcohol, as compared with that of cod-liver oil, I instanced an experiment not unfamiliar to chemists of to-day, and which was no doubt familiar to Baron Liebig. Indeed, we know that alcohol must be rich in heat-producing power, its chemical formula ($C_2 H_6 O$), ethyl hydrate, clearly justifying such an opinion. Its power in raising the temperature of water was referred to by me, and an application of the knowledge of this fact served in part to explain its action in the treatment of wasting diseases. This I did with the knowledge that the ablest authorities sustained me.

Previous to 1860, it was generally conceded by the profession that the greater portion of any alcohol taken into the system, was completely oxidized, only a small fraction being eliminated by the emunctories. In the year mentioned, Perrin and Lallemand endeavored to prove that nearly all the alcohol ingested was completely eliminated unchanged. But the whole matter has been so completely gone over by Anstie, Thudicum, and Dr. A. Dupré, that the investigations made in 1860 may be truly regarded as *passé*, in fact as well as in time. Dr. Dupré's observations, the most important of those made, may be summed up as follows: The amount of alcohol eliminated each day does not increase with the increase of alcoholic diet; and therefore, all the alcohol consumed daily must, of necessity, be disposed of daily. But since it is not eliminated within that time, it must be destroyed in the system. The amount of alcohol eliminated in both breath and urine, forms only a minute fraction of that taken into the system.

In the course of his experiments, Dupré found that after an abstinence of six weeks, on the part of those accustomed to the use of alcohol, and even in the case of one who did not use it in any form, a substance eliminated in the urine, and perhaps also in the breath, which, though apparently not alcohol, gave all the reactions ordinarily sought for in the detection of the minutest trace of that agent. The quantity of the material so closely simulating alcohol is so small, that its precise nature has not yet been determined. It is well to note in this connection, that the alcoholic material mentioned was considerably reduced during a period of alcoholic ingestion, only regaining its normal standard when the consumption of alcohol had for some days been abandoned.

It cannot be denied that on this subject there are conflicting views—what subject of medical study is entirely free from controversy? Yet the weight of evidence, both scientific and practical, goes to show that alcohol, in dietetic quantities, is retained and forms an aid to tissue construction. Bouchardat, Sandras and Duchek, conclude that alcohol is freely consumed in the body, little escaping by the urine, except where very large quantities are taken. Anstie, the authority quoted by yourself, is of opinion that the greater part of the alcohol ingested is consumed, though Parkes and Wollowicz believe that a considerable quantity escapes with the sweat and breath. Dupré's experiments, more recent than those of Anstie, prove that only a fractional part of alcohol escapes from the body, and Anstie says this never occurs but when narcotic doses are taken.

Thus it is shown that while in dietetic doses assimilation of alcohol may be complete, just as in any other form of nutriment, an excess of so highly diffusible and easily oxidized material, must as a matter of course, be thrown out of the system. The excess of nitrogen contained in animal food is subject to the same law.

The use of alcohol in every age and by every nation, since creation's dawn, demonstrates that it satisfies a natural instinct; that it literally refreshes the system exhausted by mental or physical labor, not only quickening the appetite for food and aiding the digestion, but sparing the digestive organs themselves, by limiting the amount of solid food otherwise required by the body. In short, it offers itself in the blood, as a substitute for the tissues that would be otherwise destroyed. "Alcohol," says Moleschott, is the savings bank of the tissues. He who eats little and drinks alcohol in moderation, retains as much in his blood and tissues as he who eats more and drinks no alcohol."

We may therefore conclude from the latest light given us upon this subject—and Anstie is not the latest illumination, by any means—that of any amount of alcohol taken, not in excess of the demands of the system, only a very minute proportion can be recovered from the secretions. The remainder evidently undergoes metamorphosis, and is eliminated in a new form. Hence, the doctrine that alcohol is a food, is true not only in a chemico-physiological sense, but in its more literal acceptation, inasmuch as it favors the formation of fatty products, especially noticeable in the increase of adipose tissue and by its well known tendency to produce fatty liver, kidney, and gall-stones if taken to excess.

Yours respectfully,

P. H. CRONIN, M.D.

N. W. Cor. North Clark and Oak streets.

INTERCOMMUNICATION OF STATE MEDICAL SOCIETIES.

BY A. S. V MANSFELDE, M.D., ASHLAND, NEB., SECRETARY OF THE NEBRASKA STATE MEDICAL SOCIETY.

EDITOR JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION:

Dear Doctor:—In my forthcoming report to the Nebraska State Medical Society, the following will occur:

In looking over the report of the Proceedings of our society, my attention was arrested by the following resolutions, incorporated in the report of the Committee on Foreign Correspondence, by its chairman, our efficient Corresponding Secretary, Dr. R. R. Livingston:

Resolved, That the President and two Secretaries of this Society are hereby empowered and required to designate suitable gentlemen, members of this Society, to represent all State medical societies with which this body has fraternal relations, and notify the proper officers of foreign societies of this action, requesting said foreign societies to designate suitable parties to represent this Society at their respective meetings, and that said foreign societies be requested to issue commissions to the gentlemen designated from our membership to represent them. The President and Permanent Secretary being hereby authorized to issue similar commissions to those gentlemen selected from the membership of foreign societies to represent this Society in their respective bodies.

Resolved, That the commissions provided for in the foregoing resolution shall clearly define the duties of the representative to whom the same shall be issued, and a failure to comply with the requirements of said duties, shall forfeit said commission.

Nowhere in the Proceedings following the one in which these resolutions are incorporated (the year 1877) could I find any recognition of these resolutions, and yet the great value of them, if properly executed, must be apparent to every one who has the success of his own society, the advancement of medical science, and fraternization of all physicians in the United States, at heart.

This is a very lucid example of the many instances strewn upon the pages of man's history, when suggestions of the utmost importance fall silently to the ground, for want of proper support, until some one less capable of hatching great ideas, but more ready to nurse them into maturity, stumbles on them, and again revives an interest in the project which they foster.

Gentlemen, the value of these resolutions, as it appears to my mental vision, is inestimable, wherever medical science has votaries who, not lost in their devotion to her, yet remember that they are men, with the qualities of the citizen, the husband and father, clothed also with the responsibilities of these prerogatives.

By no means, I take it, can the interests of the profession be so strongly united, and therefore made efficient, as by the manner of presentation suggested in the resolutions of your Corresponding Secretary.

I take the liberty to again present them to you; the Phœnix, born out of the ashes of the past, and ask your candid opinion, after due deliberation, whether this creature, born again, is not worthy your best and undivided attention?

In the forthcoming report of the Committee on Revision of the Constitution, I have asked that the following be inserted:

COMMITTEE ON FOREIGN CORRESPONDENCE.

This committee shall consist of duly accredited representatives (members of this Society) of the several State and Territorial Medical Societies.

They shall receive and review the Transactions of the societies whom they represent, and through their chairman, the Secretary of Foreign Correspondence, present annually a report of the advance in medicine made by said societies. They shall also report such other matters as their societies may wish to communicate to the Nebraska State Medical Society.

DUTIES OF THE REPRESENTATIVES OF FOREIGN SOCIETIES.

It shall be the duty of the representative of any foreign society to communicate all advances in matters medical and governmental made by his society during the year just past, as well as of all matters, of whatever kind, his society may wish to be brought to the notice of the Nebraska State Medical Society, to the Corresponding Secretary, as chairman of the Committee on Foreign Correspondence. And finally, the representative shall guard the interests of his society to the best of his ability, where and whensoever it is demanded.

Non-compliance with the obligation herein set forth, shall be followed by a prompt revokal of the commission held by said representative; after due notice is given to the society to whom he is accredited.

MEDICAL SERVICE ON OCEAN VESSELS.

TO THE EDITOR OF THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION.

Sir:—Infectious disease is the only foreign enemy which threatens, and may one day invade and decimate the United States.

The danger is not visionary. Small-pox and other zymotic fevers are practically endemic in many of the larger European cities, but being usually confined within narrow bounds, seldom excite public attention, yet there are times when, even in England, the pestilence stalks forth from the slums to scatter disfiguration and death among the wealthiest and the highest.

Why may it not do so here? New York sanitation is notoriously far from perfect. Lesser outbreaks are of frequent occurrence throughout the country, and since the conditions, atmospheric or otherwise, which occasionally break down all limitations of infection are more or less undetermined, who can question the possibility of our being brought face to face with the national disaster of an uncontrollable epidemic.

This much is certain: the present defective sanitary administration on ocean steamships offers an easy

ingress to infection, which existing quarantine arrangements are powerless to oppose.

When, as not unfrequently occurs, zymotic fever appears on ship-board during the trans-Atlantic passage, it is evident that many of the persons in such necessarily close proximity to the sufferer are likely to contract the disease unless efficient isolation and disinfection are immediately enforced. It is equally certain that when the period of incubation is unfulfilled at the time of disembarkation, neither will these persons have been of any inconvenience to the ship officials while on board, nor can the most careful examination at quarantine distinguish them from the healthy. They are therefore permitted to proceed to their various destinations, there to become centers of possibly indefinite dissemination.

That this actually happens, and frequently, is proven by the fact that almost every appearance of zymotic disease in any part of the United States is, as the present outbreak of small-pox at Easton, Penn., directly traceable to the recent advent of immigrants. The reasons are not far to seek: the medical officers of steamships are appointed by the owners without due regard to their fitness for the post, and are dependent upon persons whose first, if not only, care is to make the voyage with as little expense and inconvenience as possible; they are not allowed a particle of independent administrative authority in even the most purely sanitary matters, nor are they provided with the means necessary to combat disease; and lastly, many of the vessels employed are so constructed that the isolation of infected persons is absolutely impossible.

A recent example is from many points of view interesting: a steamer belonging to one of the reputedly safest trans-Atlantic lines arrived at this port some months ago with a saloon passenger on board suffering from small-pox, and shortly after arrival another case was discovered among the steerage. The vessel was granted *pratique*, discharged her passengers, returned to England, and in due course arrived here again with another consignment of passengers, and another case of small-pox; this time a steward who had served on the ship during a previous voyage, but who only developed symptoms of the disease 32 days after the former cases had been removed. There are persons, and apparently in authority, satisfied with the assumption that cases of infectious disease following thus closely one upon another are unfortunate coincidences for which no person may be held responsible. In the public interest, more careful inquiry would seem to be desirable. The interval of time precludes the possibility of this steward having been infected directly by either of the previous cases, or during his former stay in this city. It is highly improbable that he contracted the disease from an independent source at Liverpool, since small-pox was not prevalent there. Remaining is the choice of two equally unpalatable solutions: either the steamer was inefficiently disinfected after the removal of the first cases, and variolar germs surviving not less than sixteen days after the supposed disinfection (?) infected this man during the latter days of the eastward passage; or there were a succession of small-pox cases on board this vessel, which were not recognized or were intentionally concealed from the health officer of this port, and from the public. A visit to the ship strongly confirmed the last supposition.

The hospitals for infectious disease were situated not upon the upper deck, but between the decks, in the forward part of the vessel, opening off, and ventilated *exclusively* into, a covered-in passage running through the first-class saloon the entire length of the vessel. In fact, if the builders had set themselves the task of constructing and locating these hospitals so as to disseminate throughout the inhabited parts of the ship every germ of infection coming from within, such an end could scarce have been more skilfully attained. And this is not an isolated instance of total disregard of sanitary law on ocean steamers.

Within five months, dating from the 11th of January, 1882, no fewer than twenty vessels infected with small-pox entered the port of New York; upon four only was even partial quarantine enforced. The remaining sixteen were granted *pratique* as soon as the passengers and crews had been vaccinated. No doubt it was better to vaccinate than do nothing, but under the circumstances, vaccination cannot be regarded as protective, since it is admitted that it cannot even modify small-pox, previously contracted, unless it has been so timed that the maturation of the vaccine vesicle shall precede the period of variolous invasion.

The order by which the surgeons on trans-Atlantic steamships are required to vaccinate the steerage passengers within twenty-four hours after starting, is in most instances practically ignored, seldom complied with during the time named, and when attempted, with what results may be judged from the report of the health officer. One surgeon reported 200 vaccinations, of which not one proved successful, another 250, of which only two proved successful, and so on. But even if this order were carried out to the letter, it would be at best but a choice of evils, and I think the wrong one. That the medical officer of a crowded steamer should neglect other more pressing duties to vaccinate steerage passengers during the first day, or even days of the voyage, would be manifestly inexpedient for the general welfare. On other grounds it would be both cruel and unscientific; cruel as disturbing unnecessarily persons already miserable, many of whom would be in the throes of sea-sickness and might claim at least to be let alone; unscientific, and calculated to discredit this most valuable of prophylactics, as challenging an epidemic of erysipelas under conditions combining to favor its development and spread.

Thus is quarantine administered, and thus is the United States sown with foreign infection, which will assuredly one day take root and flourish.

Is it wise to wait until the panic of that day shall call forth extreme precaution in measures repressive of convenient travel and healthful immigration.

Surely it were better that Congress should at once, by moderate legislation, guard the country against pestilence, and insure the protection of intending citizens during the ocean transit.

This may be done by (1) requiring all persons

coming to the United States to show evidence of having been vaccinated at least fourteen days previous to embarkation; (2) by insisting that the vessels carrying them shall provide proper hospital accommodation, and necessary assistance for the care of the sick; and (3) by establishing a competent service of marine medical officers, who, being entirely independent of interested influences, will see the law observed throughout the voyage, and will be responsible to Government for the faithful discharge of their duties, and intelligent coöperation with the quarantine authorities. I am, sir, your obedient servant,

J. A. Erwin, M.A., Cambridge, Eng., M.D.,
Late Visiting Physician to the Manchester Southern Hospital for Women and Children,
April 19, 1884. 363 Fifth Av., N. Y.

ON REDUCTION OF DISLOCATIONS BY MANIPULATION.

April 22, 1884.

Sir:—In reading the last edition of your Journal, I was not a little surprised at your reference to my communication on the above-named subject, and I now trust that in a spirit of fairness you will give equal publicity to my reply. You have asserted that one of your motives for inserting my communication was to make it the occasion of correcting my erroneous views concerning the status of surgical progress in this country. In such a case, I think that your comments should have appeared in the same number of the Journal, together with the article commented upon—whereas they failed to appear until two weeks afterwards—and this, to say the least, was somewhat lacking in courtesy, and entirely at variance with editorial custom.

In stating that manipulation was but little taught in schools, I based my belief on the information of several medical men here, with whom I had conversed on this subject—and this, together with the fact of the patient whose case *I* published, and who had been treated six times for a recent simple dislocation of the humerus by four or five different surgeons here, none of whom had employed manipulation, sufficiently warranted me in my assertion. During the five years I spent at the study of medicine in Dublin, where the standard of medical education is admittedly high and thorough, I remember there were only a few lectures delivered on this subject, and that in the instructions given by private teachers ("grinders" or "coachers" as they were familiarly yclept), it was very little dwelt upon—and I afterwards found that the same was the case in London. With regard to that part of my assertion concerning the text-books, I know that manipulation has been fully and ably dealt with in some few works, as in the one instanced—Prof. H. H. Smith's work on the Principles and Practice of Surgery—but these are not text-books, and reference to the well-known and generally read text-books on surgery of Druitt, Bryant, and Holmes will bear out my assertion that only a very fleeting notice indeed is awarded therein to the subject. Manipulation has been taught in almost all countries by a few individual professors, as in the United States, by Profs. Smith, Hodgen, and Brainerd, and in Great Britain and Ireland, by Messieurs. White, of Manchester, and Croly and Stokes, of Dublin, and a few others, but this is no proof whatever that manipulation is at all sufficiently taught, much less that "direct and full instruction" on the subject is generally given—and I trust I may be pardoned for still doubting that such is really the case.

In my communication I merely invited the attention of the editor and readers of the Journal of the American Medical Association, to the subject of manipulation, which all will concur with me, is surely worthy of attention, and in doing so, I had no intention of raising an issue concerning the medical teaching here, nor of reflecting invidiously on the status of surgical progress in the United States, and I shall only add in conclusion, that I regret that any of my statements have been misunderstood, and I trust that this explanation will show that my communication was dictated, not by a spirit of alienation, bnt by a feeling of friendliness and coöperation.

M. M. Louis Hutchinson,
L.R.C.S., I.L.K.Q.C.P.I., etc.

SPECIAL NOTICES.

Ashland, Neb., April 14, 1884.

Editor Journal American Medical Association, Chicago.

Dear Doctor:—The Nebraska State Medical Society will meet in annual session at 9 o'clock A. M., Tuesday, May 13, in the city of Omaha. Physicians in affiliation with the A. M. A., who may intend going West, are cordially invited to attend our meeting. Very truly yours,

A. S. V. Mansfelde, Sec.

NECROLOGY.

Bullock, Otis, M.D., of Warren, R. I., was the son of Dr. Samuel and Betsey Bullock, born in Sterling, Conn., Feb. 20, 1806; died of pneumonia, March 6, 1884. His father practiced medicine until about 80 years of age, in Rehoboth, Mass., where he died at the age of 92.

Dr. Bullock was for three years a student at Day's Academy, in Wrentham, Mass. He studied medicine with Dr. Usher Parsons, of Providence, who was surgeon of Perry's Flag Ship, at the battle of Lake Erie. He graduated at Harvard Medical College, in March, 1832. Dr. Bullock commenced practice in Warren, R. I., and for some years was a partner of Dr. Williams, the leading practitioner in the town, to whose practice he succeeded. He was a prominent and popular member of the Rhode Island Medical Society, and was rarely absent from a meeting. He was elected a Censor of the society in 1840, which position he held until his death, nearly forty-four years. He was elected President in 1866, and

served one year. He joined the American Medical Association in 1860. In 1836 he married Martha M. Randall, who died in 1837. In 1842 he married Elizabeth H. Saunders, who died in 1873. In 1875 he married Mary F. Collins, who, besides two sons, survive him. Dr. Bullock's remains were buried March 10, in South Cemetery, R. I.

W. E. S.

MISCELLANEOUS.

THE POPULAR VIEW OF PROTECTION AGAINST CONTAGIOUS GERMS.—A correspondent of the *Medical Times* says: "The wide-spread fear of contagious germs and the appreciation of the value of antiseptics seems to be more intense on the Continent than with us, if I may judge from what I saw and heard last year when on my travels. For example, the chance of inhaling tuberculous bacteria has been met by a sanitary spittoon, and the fear of absorbing poisonous matters at the other end of the body by antiseptic closet paper, both for use and placing on the seat. The former I met with in Germany under the name of 'Cellulose Closetpapier mit Salicylsäure getränkt,' and the latter in France as 'feuille hygienique de la siege des water-closets avant de sig assevir garantit de tout contact malsain et dangereux.'"

COPENHAGEN AND THE INTERNATIONAL MEDICAL CONGRESS OF 1884.—A writer in the *Lancet* gives under this head some very interesting information respecting Copenhagen. Thus, he tells us that the Danish language much resembles English, so much so that the Professor of English at the University of Copenhagen, himself an Englishman, considers the two languages to be merely two different dialects; the pronunciation is very different, but most educated Danes understand English and speak it pretty well, and in shops, restaurants, tram-cars, etc., Englishmen will often find people who understand them. Amongst well-known medical men of the past the following are worthy of mention: Ole Worm, who died in 1654, and was the first who described the ossicula intercalaria s. Wormania; Thomas Bartholin, who died in 1680, was the discoverer of the lymphatic vessels; Winslow, who died in 1760, was professor of anatomy in Paris, to which city he removed after his perversion to Roman Catholicism; Callisen, who died in 1824, was the first to perform colotomy in the left lumbar region, and Jacobsen, who died in 1843, was the first to construct a strong and useful instrument for lithotrity, and first described the tympanic nerve, which is therefore also called nervus Jacobsonii. Denmark also boasts of Oersted, the well-known discoverer of electro-magnetism.

Its (Copenhagen) university is more than four centuries old, and offers free education to all. The public lecturers are supported by the State, receiving an annual government grant. The private lecturers receive neither government grant, nor students' fees, but work entirely *honoris causâ*. There is a large, old building called "Regensen," which was built more than 200 years ago, where a hundred students live gratuitously, and receive, besides, a small grant of money every month. There are also smaller houses erected by private people for the same purpose. In addition, there are private and public funds to help the poorer students in the purchase of either books or instruments, such as microscopes, etc. The students usually enter the University at the age of eighteen and leave at the age of twenty-five. The female students of Denmark are as yet but few. They attend exactly the same lectures as the male students, and nothing is especially arranged for them. In Denmark nobody is allowed to practice as a medical man unless he has passed a certain examination at the University. The medical education is very thorough, and extends generally over six to eight years. The theoretical part is given at the University, the practical at the different hospitals, of which one, the Fredrichs Hospital, is connected with the University, so that its physicians and surgeons are always professors at the University. The medical student attends lectures on philosophy the first year, and then passes an examination on this subject. Besides preparing himself for this examination, he also studies chemistry, botany, zoölogy and natural philosophy, which are the subjects for the next examination, generally passed half a year or one year later. From this time begins the medical education proper, the students being in the hospitals as clerks and dressers during the morning, and attending lectures during the afternoon. Five to seven years after having entered the University the medical students pass examination in anatomy, with dissection, physiology, and pharmacology, and one year later the final examination in medicine and surgery, both theoretical and practical, in morbid anatomy, with necropsies, in midwifery, and medical jurisprudence, in which latter the candidate has to write a paper on a given subject. Ultimately the candidate must write a paper on some given medical, and another on some surgical, topic. He is allowed four hours for each. Much attention is paid to the practical education, the candidates being obliged to produce certificates of attendance at a certain number of hospital clinics. Every one who aspires to the rank of M.D. must prove his scientific knowledge by a work on some medical subject which is submitted to the Faculty of Medicine for approval. If accepted, it is then printed in book form, copies are distributed, and on a fixed day he must publicly defend his opinions against professors chosen specially by the University, and all others who may desire to enter the lists against him.

MATERIAL FOR CASTS.—Mr. Charles W. Cathcart, in the *Edinburgh Clinical and Pathological Journal*, has an article on the use of a composition as follows:

Strong, clear glue or gelatine	4 oz.
Glycerine	4 oz.
Water	1 oz.

He breaks the glue into small pieces, soaks for an hour in cold water, melts and adds to the warm glycerine. When thoroughly mixed, this substance can be poured into any mould, and when cool it is quite

tough and elastic. Its clear, brownish color is an objection which is overcome by oxide of zinc, 1 lb.; glycerine ½ lb.; glue 1 oz; mix the glycerine and oxide of zinc, and add the glue melted. For a flesh tint add solution of burnt sienna rubbed up in glycerine, or of vermilion in glycerine.

This material cuts with something like the consistence of skin, is elastic, and and is tough enough to hold stitches. It may be used to illustrate certain plastic operations, such as hare-lip. In making casts it is not necessary to prepare the plaster mould, other than to see that it is perfectly dry. When cold it may be *pulled* out without fear. The cost per lb. is from 1s. 6d. to 2s., and the specimens keep well.

NEW BOOKS.

Chibrte Un cas extraordinaire d'héméralopie congenitale. Paris: Davy. 8vo., 44 pp.

Cornil et Babés. Note sur le siége des bactéries dans la variole, la vaccine et l'érysipéle Paris: Alcan-Lévy. 8vo., 6 pp.

Cravin, A. Etude clinique sur la montée du lait chez les nouvelles accouchés. Paris: Davy. 8vo., 64 pp.

Denarié, A. Contribution à l'étude de là syphilis cornienne, gomme de la cornée. Paris: A. Delahage et Lecrosnier. 8vo. 66 pp. et planche.

Desnos. Sur les différent degres d'altérations anatomiques des cordons médullaires postérieurs considéris dans leurs rapports avec la curabilité de l'atarie locomotrice. Paris: Alcan-Lévy. 8vo., 4 pp

Du Castel. Rapports sur les maladies régnantes fait à la Société médicale des hopitaux de Paris. Paris: Dumy et Cie. 8vo., 86 pp.

Eustache, G. Etude sur les lochées dans l'état normal et les états pathologiques. Paris: Delahage et Lecrosnier. 8vo., 136 pp.

Guérin. Principales affections de l'oreille, bruits, écoulement, surdité. 22d edition. Paris: Goupryet Jourdan. 18mo., 104 pp.

Hellen. De la pleurésie franche primitive et inflammatoire chez les vieillards. Paris: Davy. 8vo., 68 pp.

Horteloup. De l'uréthrotomie extreme contre les rétrécissements de l'uréthre. Paris: Coccoz. 8vo., 19 pp.

Lallemant, C. De la gangrene foudreyante spontanée des organes génitaux extremes de l'homme. Paris: Davy 8vo., 46 pp.

Le Brigant. Essai sur la tuberculouse pulmonaire dans ses rapports avec l'alimentation. Paris: Davy. 8vo., 123 pp.

Lediberder. De la scarlatiné, sa nature et son traitement, Paris: Alcan-Lévy. 8vo., 8 pp.

Lubelski. De l'alcovlisme en Pologne. Paris: Bondet. 8vo., 12 pp.

Marry, J. De l'action antiseptique de sulfate decuivre en obstétrique; prophylaxie et thérapeutique des accidents infecteux des suites de couches. Paris: Davy. 8vo., 27 pp.

Martineau. Lecons sur la vaginite nou blennorhagique. Paris: Delahage et Lescrosnier. 8vo., 44 pp.

Martinet, A. De l'angine de poitrine rhumatismale (hypérémie du plexus cardiaque.) Paris: Delahage et Lecrosnier. 8vo, 94 pp.

Michaux, P. Contribution à l'étude du carcinome de la parotide. Paris: G. Masson. 8vo., xii, 90 pp.

Nicolas, A. Contribution à l'étude de l'arthrotomie antiseptique. Nancy: Sordrillet. 4to., 163 pp.

Menard, V. Contribution à l'étude des tumeurs blanches et des abcés froids dans leurs rapports avec l'infection tuberculeuse. Paris: Davy. 8vo., 136 pp.

Olive. Des formes cliniques de la colique hépatique. Paris: Davy. 8vo., 75 pp.

Patenostre, J. De l'identité de l'aptlerite puerpérale et d'une certaine forme d'arhtrite blennorrhagique. Paris: Davy. 8vo., 40 pp.

Phélippeaux. Note sur le mandrin trachéotome et sur le trachéotome à manche dilàtateur-conducteur (instrument nouveau). Paris: Lauwereyns. 8vo, 24 pp.

Poncel. De l'influence de la congestion chronique du foie dans la genése des maladies. Paris: A. Delahage et Lecrosnier. 8vo., 121 pp.

Simon, J. De la sclérose cérébrale chez les enfants. Paris: Lauwereyns. 8vo, 36 pp.

Sokoloff. Elytrorrhaphie médiane, on Elytrocleisis partialis mediana du docteur Neugebauer, comme moyen de traitement opératoire du prolapsus uterin complet. Paris: Lauwereyns. 8vo., 19 pp

OFFICIAL LIST OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT UNITED STATES ARMY, FROM APRIL 19, 1884, TO APRIL 25, 1884.

Hoff, John Van A., Captain and Assistant-Surgeon, to be relieved from duty at Alcateag Island, Cal., and to report to the commanding officer at Fort Mason, Cal., for duty as Post Surgeon. (Par 3, S. O. 45, Hdqrs. Dept. of Cal., April 16, 1884.)

Porter, Joseph Y., Captain and Assistant-Surgeon, granted leave of absence for 2 months, to take effect about May 5, 1884. (Par. S. O. 38, Hdqrs. Division of the Missouri, April 19, 1884.)

Biart, Victor, Captain and Assistant-Surgeon, granted leave of absence for one year on surgeon's certificate of disability, with permission to leave the Division of the Missouri. (Par. 2, S. O 91, A G.O., April 19, 1884.)

La Garde, Louis A., Captain and Assistant-Surgeon, granted leave of absence for one month, with permission to apply for two months' extension. (Par. 1, S. O. 91, A.G O., April 19, 1884.)

LIST OF CHANGES IN THE STATIONS OF MEDICAL OFFICERS, U. S. NAVY, FOR THE WEEK ENDING APRIL 26, 1884.

P. A. Sur con C T. Hibbett ordered to U. S. Iron-clads James River, Va

P. A. Surgeon H Aulick, detached from Iron-clads and ordered to "New Hampshire"

P. A Surgeon W. S. Dixon, detached from "Hartford" and ordered to Coast Survey Str. "Hassler"

Pr A. Surgeon F. H. Terrill, detached from "Hassler" and ordered to "Hartford"

Surgeon J. C. Wise, detached from "New Hampshire" and placed on waiting orders.

Medical Inspector W. K. Schofield, appointed Medical Inspector on Active List.

P. A. Surgeon F. S. Nash, detached from Laboratory and ordered to "Alert" (Greely Relief Expedition).

P. A. Surgeon J. H. Hall, ordered before Retiring Board.

Medical Inspector H. C. Nelson, placed on Retired List.

P. A. Surgeon S. W. Battle, placed on Retired list.

P. A. Surgeon F. H. Terrill, resigned.

P. A. Surgeon J. M. Murray, ordered to "Minnesota."

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AND OF ITS SEVERAL SECTIONS 1883-4.

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THE

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ORIGINAL ARTICLES.

ANNUAL ADDRESS.

BY AUSTIN FLINT, SR., PRESIDENT OF THE AMERICAN MEDICAL ASSOCIATION FOR 1884.

The American Medical Association has reached an age when the thoughts of one whose retrospections extend to its birth, naturally revert to the natal period of its existence. Of those who coöperated in the formation of the Association, not many now remain, and after a few more annual meetings all will have passed away.

Thirty-eight years ago, a medical convention was held in the city of New York, in compliance with a recommendation by the Medical Society of the State of New York, in 1845. In 1839, the Medical Society of the State of New York adopted a resolution recommending a national convention to be held in Philadelphia in 1840. This action of the society was without effect. In connection with the recommendatory resolution adopted in 1845, a committee of three was appointed to carry the resolution into effect, and the mover of the resolution, Dr. N. S. Davis, was made chairman of that committee. Thanks to his zeal and energy, at the time and place designated by the Medical Society of the State of New York, the convention was held, and attended by about one hundred delegates, representing medical colleges and societies in sixteen States of the Union. I can bear testimony from personal recollection to the enthusiasm which characterized that convention. The convention resolved that it was expedient to form a National Medical Association, and a committee of seven was appointed to report a plan of organization at a second convention, to be held in Philadelphia in May, 1847. A committee of seven was to report, at the same time and place, a uniform and elevated standard of requirements for the degree of M.D. Another committee of seven was appointed to report on a suitable preliminary education for the study of medicine; and a committee of seven was appointed to report a code of medical ethics.

At the convention held in Philadelphia in May, 1847, there were present 250 delegates, 40 medical societies, 28 medical colleges, 22 States of the Union, and the District of Columbia being represented. I can testify to an enthusiasm even greater than at the first convention. Resolutions reported by the several committees appointed at the New York convention were adopted. These resolutions embraced a plan of organization, a constitution and by-laws, together with the now existing Code of Medical Ethics, and the convention was merged into the American Medical Association. Thus, the birth of the Association was in 1847, and it therefore now enters upon the 38th year of its existence.[1]

What motives led to the formation of the Association? First and most prominent was a desire to promote improvements in medical instruction, and to advance the standard of professional acquirements. These were the aims stated in the call for the first convention. A more comprehensive statement was expressed in the first of a series of resolutions proposed by Alfred Stillé, and offered by Isaac Hays, as follows: "It is expedient for the medical profession of the United States to institute a National Medical Association, for the protection of their interests, for the maintenance of their honor and respectability, for the advancement of their knowledge, and the extension of their usefulness." It had become evident that for the ends expressed in this resolution the profession in this country must rely mainly on itself. Little was to be expected from State Legislatures. These bodies then, as now, were indisposed to legislate in behalf of medical education, except to charter new colleges; they were even reluctant to legalize dissections. They had not then, nor have they since the formation of the Association, recognized the promotion and diffusion of medical knowledge as legitimate objects for ample appropriations of public funds; as a rule, so far as legalized protection, sanction, and encouragement go, they have been not less considerate of irregular than of regular medical practice, and indeed, the terms regular and irregular denote a purely professional, not a legal, distinction. The State of New York, at the time of the first convention, had virtually admitted the right of any one to practice medicine; in few, if any, of the States of the Union were there legal restrictions, and in some there were no laws whatever relating to medical practitioners. Nor was much to be expected then, as now, from individuals outside of the profession. Liberality, philanthropy, and public spirit had not, and as yet has not, except in rare instances, taken a direction toward medical instruction and the advancement

[1] The annual meetings were suspended from 1860 to 1863, that is, for the years 1861 and 1862. The suspension of the meetings for these two years was owing to the civil war. It is worthy of note that the Medical Society of the State of New York, in February, 1863, adopted unanimously a resolution in favor of resuming regular annual meetings of the Association.

of medical knowledge. A conviction of the necessity for self-reliance, and a deep sense of the importance of the ends set forth in the resolution which I have quoted—these were the main-springs in the movement which resulted in the organization of the American Medical Association. The need for uniting in council members of the profession from all parts of the country, was widely felt. The feeling was catholic, not sectional. The ends had reference not to a single State, but to the United States. When Davis introduced his resolutions, at the meeting of the Medical Society of the State of New York, in 1845, the "fullness of the time had come," and in the providential order of human events, the American Medical Association came into existence. Its development and growth were rapid. It has now passed through a healthful adolescence into a mature age. It has outlived and profited by the errors and imperfections incident to youth. We have before us to-day the proof that it is replete with vitality and vigor.

I have not indulged in these reminiscences of the origin of the Association, with the intention to revive its subsequent history. As furnishing appropriate topics for my discourse on this occasion, I take for my text the preamble to the plan of organization, adopted at the formation of the Association. This preamble is as follows:

"WHEREAS, The medical convention held in the city of New York, in May, 1846, have declared it expedient for the medical profession of the United States to institute a National Medical Association; and inasmuch as an institution so conducted as to give frequent, united and emphatic expression to the news and aims of the medical profession in this country, must at all times have a beneficial influence, and supply more efficient means than have hitherto been available here, for cultivating and advancing medical knowledge; for elevating the standard of medical education; for promoting the usefulness, honor and interests of the medical profession; for enlightening and directing public opinion in regard to the duties, responsibilities and requirements of medical men; for exciting and encouraging emulation and concert of action in the profession, and for facilitating and fostering friendly intercourse between those who are engaged in it; therefore, *be it resolved*, in behalf of the medical profession of the United States, that the members of the medical convention held in Philadelphia in May, 1847, and all others who, in pursuance of the objects above mentioned, are to unite with, or succeed them, constitute a National Medical Association."

The objects of the Association are here clearly and tersely set forth. My remarks will have reference to those objects. The topics which, in connection therewith, suggest themselves, are so many and large, that, with a due regard to the length of my discourse, not a few must be omitted, and none can be fully considered.

The terms "cultivating and advancing medical knowledge," by which the first object is expressed in the preamble, imply that medicine is progressive. No one of those whom I address will deny the assertion that medicine is now progressing as it has progressed in the past, and that it will continue to progress in the future. I do not doubt that the present stage of its progress will hereafter be cited as an important epoch in its history. For the past quarter of a century, histological and clinical studies have tended to develop more and more our knowledge of the existence of specific agents in the causation of diseases. That, as regards certain diseases, these specific agents are micro-organisms, has been demonstrated. The latest discovery in this direction is that of the bacillus tuberculosis, a discovery which is the leading topic in medical literature at the present time. Recent trustworthy researches go far toward demonstrating the existence of specific organisms in pneumonia, typhoid fever, malarial fever, and epidemic cholera; and, reasoning by analogy, it is a logical conclusion that ere long a host of diseases will be proven to be parasitic. It is easy to perceive how important must be the bearings of these developments in ætiology and pathology on prophylaxis and therapeutics. A new era is about to be inaugurated in these practical departments of medicine. Professor Huxley, in his address at the International Medical Congress in 1881, uttered a prediction in these words: "It will become possible to introduce into the economy a molecular mechanism, which, like a very cunningly contrived torpedo, will find its way to some particular group of living element, and cause an explosion among them, leaving the rest untouched." I would rather say that the time will come when means will be found to destroy morbific agents outside of the body, thereby securing the prevention of diseases; and that means will be found to effect the destruction of these agents within the body, thereby arresting the course of diseases. Let us hope that the medical profession in this country will take an honorable part in the labors for the cultivation and advancement of medical knowledge with reference to these most desirable results! At all events, let us continue to recognize and apply medical knowledge, wherever it may originate!

"For elevating the standard of medical education;" these terms express the second of the objects enumerated in the preamble. At the first convention, held in 1846, a committee was appointed to report on "a uniform and elevated standard of requirements for the degree of M.D., to be adopted by all the medical schools in the United States." Another committee, at the same convention, was appointed to report on the "standard of acquirements which should be expected of young men before being received as students of medicine." These committees, at the second convention, in 1847, submitted reports which were adopted. Now, it has been charged upon the Association that its recommendations in regard to medical education have been nugatory. If, however, the recommendations embraced in these reports be referred to, it will be seen that there is less room for reproach than some may have supposed.

The committee on the requirements for the degree of M.D. reported in substance as follows: That the college terms be extended from four to six months; that candidates for the degree of M.D. shall have

attended two full courses of lectures before graduation; that three years should be devoted to the study of medicine; that a certificate of pupilage by a preceptor who is avowedly and notoriously an irregular practitioner should not be accepted; that the number of professors in medical schools be increased to seven; that candidates shall have devoted three months to dissections; that preceptors should avail themselves of every opportunity to impart clinical instruction to their pupils.

It would be absurd for the Association to renew these recommendations at the present time. The progressive advancement in medical instruction in most of our colleges has long since gone far beyond them. It is not to be doubted that the Association exerted not an inconsiderable influence in the progress which has been made in medical instruction. That there is room for further advancement, no one will deny, and it is certain that it will continue in the future as in the past, albeit not, perhaps, with a celerity to satisfy those who seem to derive gratification from the disparagement of medical education in this country. Improvements which, although steadily progressing, are to be promoted, relate to a closer union of didactic with clinical teaching, and especially to practical exercises in the investigation of cases of disease; to increased demonstrative instruction in special branches of medicine, such as histology, the microscopical and chemical examinations of morbid products, together with the fluids of the body in health as well as in disease; the physical exploration of the lungs, heart, and other organs, etc.; to a larger allowance of time, in connection with oral teaching for recitations; to the substitution of recitations, to a greater or less extent, for didactic lectures in certain departments; and to an extension of the period of medical pupilage.

The educational advantages, exclusive of those relating to college sessions, although vastly better now than heretofore, may be much extended and made more available than at present. The pupils who, between college sessions, study in the offices of medical practitioners in the country, reading such books as they find in the meager and perhaps antiquated libraries of their preceptors, accompanying the latter in their "rides," preparing medicines and making themselves generally useful, may undoubtedly pick up many facts and ideas which will become useful in after life; but it hardly requires argument to show that systematic private instruction is much to be preferred. Moreover, methodical reading and recitations are essential, not only for the information thereby obtained, but in order that the pupil may acquire, if it have not been already acquired, what may be called the art of study. There are those who, having obtained their medical education chiefly from oral teaching and demonstrations, cannot apply the mind to study by means of books, although not indifferent to the knowledge to be thus obtained, for the simple reason that they lack the ability to be acquired only by practical training.

At the present time, the most important of the means for elevating the standard of medical education, relate to the preliminary requisites for the study of medicine. The committee appointed in 1846 to report on this subject, recommended that members of the medical profession throughout the United States should satisfy themselves, before receiving young men as students, that they have acquired "a good education, a knowledge of natural philosophy and the elementary mathematical sciences, including geometry and algebra, and such an acquaintance at least, with the Latin and Greek languages, as will enable them to appreciate the technical language of medicine, and read and write prescriptions." It was also recommended that the medical colleges require a certificate of such an amount of preliminary acquirements before matriculation.

These requisites are, assuredly, neither in number nor degree, unreasonable. The need of any knowledge of the dead languages has been doubted; but when it is considered that the names of all the organs and tissues in the body, and the nomenclature of diseases, together with terms used in physiology, chemistry, materia medica, pharmacy, surgery and obstetrics, are of either Greek or Latin derivation, it is difficult to understand how the student can dispense altogether with this knowledge. The want of it must, to say the least, be a great drawback. A thorough acquaintance with these languages, philologically, or with reference to an appreciation of the literature of Greece and Rome, however elegant as an accomplishment, is by no means essential as preparatory for the study of medicine, and it may fairly be questioned whether the time usually spent in the study of the Greek and Latin authors by those who graduate in arts at our colleges, might not be given with much more profit to physics, chemistry, and the French and German languages. To the requisites recommended by the Association might be added, with advantage, knowledge of the elements of chemistry, leaving only the practical applications of this science in the different departments of medicine to be taught in our medical schools.

It must be confessed that the progress in the matter of the preliminary education of medical students, is less satisfactory than that in medical instruction. Not a few medical students are deficient in the knowledge and the mental training requisite as preparatory for the study of medicine. The fault, exclusive of the students themselves, lies in part with the medical schools, and partly with private preceptors; more with the latter than the former, inasmuch as to them, generally, applications are first made to enter upon the study. I have no wish to be an apologizer for either; there is blame on both sides, and there should be mutual coöperation in an effort to remove the greatest of the present obstacles in the way of elevating the standard of medical education.

The practical question is, what can the Association do to promote more and more the elevation of the standard of medical education? I will meet this question, in the first place, by suggesting what it is desirable should not be done.

It is not judicious to decry medical education in this country as unworthy of any commendation, and as contemptible when contrasted with the educational advantages of other countries. The low estimate in

which medical education in America appears to be held by some of our writers, is not only discouraging, but it is without any warrant from facts. Our methods of teaching have certain notable advantages above those of other countries; and in respect of effectiveness in practical branches, we have no occasion to be ashamed if comparisons be fairly made.

It is alike impolitic and unjust to depreciate, as is sometimes done in offensive terms, the medical profession of the United States. As a body, the members of our profession in this country are neither ignorant nor in any respect unworthy. The profession is honorable and honored. In no other country is the social status of its members higher. If a distinction be not always drawn, in public estimation, between true merit and either pretentious ignorance or fraudulent assumption, this is an evil by no means confined to our country; it is incident to the peculiar character of medical knowledge and to human credulity. Granting the need of a better average of professional acquirements, it is not to be effected by abuse of the profession as a whole.

Sweeping charges against medical schools of venality and deception, are not less unwise than unbecoming. As regards their maintenance, the condition of the medical schools in this country, when compared with those of other countries, is anomalous. For the most part they are unendowed, and therefore must be self-sustaining. If they cannot offer adequate inducements for patronage, they cannot exist. This condition has its advantages, but also its drawbacks. There is but little ground for the accusation of resorting to dishonorable methods to secure patronage. I may venture to assume some degree of competency to speak with confidence in regard to this matter, it having fallen to my lot to have been connected with several medical colleges, and I aver my belief that the endeavor to entice students by an expectation of easy graduation, or by any other disreputable inducements, must be rare exceptions to the rule. Granting that there are exceptions, and that some colleges may be guilty of flagrant abuses of their chartered rights, is it not more just, and in all respects better, to pursue measures for the extinction of their rights, as for rendering their degrees nugatory, than to make the evil doings of a few the ground for indiscriminate abuse, embracing colleges which are striving to do their duty to their pupils, to the medical profession and to the public?

It is injurious and an injustice to assert, as is often done, that a large proportion of those pursuing the study of medicine in this country, are governed by a desire to gain admission to the profession as quickly, as cheaply, and with as little medical knowledge as will suffice for that object. Here it may not be too presuming in me to speak with some authority, having, as a teacher for forty years, been brought into relations with many thousand medical students from the Northern, Southern, Eastern and Western States of the Union. As a class, they will compare favorably with those preparing for the sister profession or for any of the callings of life. A large proportion evince a degree of diligence and perseverance not excelled, as I believe, in any other country. I rejoice in the present opportunity to bear this testimony, based on personal knowledge, in behalf of the much and undeservedly abused American medical student.

Elevation of the standard of medical education is not to be promoted by means such as have just been adverted to. Vituperation does not supply motives for improvement. Reforms are not favored by obloquy. He who is content to do battle with the sword of ridicule, has not the spirit of a true reformer. I have no disposition to deny or to take the attitude of an apologist for defects and abuses which affect, directly or indirectly, the standard of medical education. Some of the evils most complained of might be obviated by the united action of the members of the medical profession. Much is said respecting the overcrowding of the profession by the large number of annual graduates, and this evil is attributed to the number of medical colleges. Assuming for the nonce, the fact, together with the explanation, and that the evils overbalance the advantages of an active competition among the colleges, how is the number of these to be reduced? Reliance on State legislators are likely to take away charters which have been granted, and they will probably continue to be complaisant enough to grant new charters to persistent applicants. But suppose all private preceptors were to induce their pupils not to connect themselves with colleges which are either misplaced or deficient in the means of instruction; a certain number would cease to exist, and the result would exemplify the Darwinian doctrine of the "survival of the fittest."

Again, suppose private preceptors throughout the United States were to unite in declining to either receive as pupils, or to advise entering on the study of medicine, all who lack the proper requirements, the evil of the deficiency in preliminary education would be at once removed.

I revert to the question, "What can our Association do to promote more and more the elevation of the standard of medical education?" It is to be borne in mind that, exclusive of the motives for personal improvement which appeal to its members individually, the profession must rely upon itself for whatever is to be done. The American Medical Association represents the profession of the whole country. Hitherto the Association has been content with reports, addresses, and communications pointing out existing defects in medical education, and recommending changes and improvements, the immediate adoption of some of which was impracticable. Too often a predominant spirit of animadversion has been apparent. Let a course be pursued which is more active and practical, with reference to measures for progress. Let certain measures be proposed for immediate adoption, which are within the limits of practicability. Let these measures receive the sanction and support of local Associations in the different States of the Union. Let the National Association take the initial steps and solicit conferences with, and the coöperation of, State Associations and the leading medical colleges throughout the country, with a view to agreement respecting the proposed definite measures. Let these steps be taken in a kindly spirit, with an earnest desire to harmonize different views and

interests, in order that there may be united action as regards improvements agreed upon. In this way, as we may hope, uniformity in the different States will be secured in behalf of the second of the objects for which our Association was instituted. There can be but little difference of opinion as to improvements in medical education which it is desirable should be effected; the opposing difficulties are chiefly those which interfere with uniformity throughout the United States. I venture to suggest the appointment of a standing committee on medical education, with a view especially, by means of communications with State Associations and colleges, to secure uniform action with reference to requirements for matriculation and for graduation. My purpose in the suggestion of such a committee, is not to obtain reiterated resolutions setting forth what ought to be done, but reports, at the next meeting and at subsequent meetings of the Association, of what has been actually accomplished. It is not to be expected that all desirable improvements will be at once effected. Considering the greater relative importance of preliminary requisites for the study of medicine, were these made the first objective point in the action of the committee with a satisfactory result, a very important advance would be made, and this would be likely to prove an earnest of success in effecting other improvements.

A plan for the elevation of the standard of medical education, which has been recommended by the Association, consists in making the degree of M.D. purely an honorary distinction, not rendering the graduate thereby legally qualified to practice, this qualification to be derived from a licensing board composed of examiners not engaged in medical teaching. Of this plan I forego discussion, for the reason that it would exclude the consideration of topics which seem to me more important. With no disposition to undervalue its recommendations, I will simply remark that, aside from certain intrinsic objectionable features, it is open to objection on the ground of the impracticability of securing uniformity in the different States of the Union, and because it contravenes the principle of self-reliance in matters relating to our profession.

In the language of the preamble, the third object of our Association is "for promoting the usefulness, honor, and interests of the medical profession."

I shall confine my remarks on this object to a topic which is, perhaps, at the present time, the most important as bearing upon it. I refer to medical ethics. I need not undertake to represent to this audience how manifold, delicate, and peculiar are the professional duties and relations of the medical practitioner. There is no other calling in which so much depends on the conscientiousness and uprightness of those who practice it. There is no calling in which the temptations and opportunities for deviations from rectitude are so great. In the enumeration of the attributes of the physician by Hippocrates, with "learning and sagacity" were conjoined "humanity and probity."

In order to practice medicine with proper self-respect, the practitioner must himself honor the profession, and in order that medical services shall be properly respected, the profession must be honored in public estimation. The duties incident to medical practice are often of a nature to render them menial and degrading, were they not required by a humane and honorable calling. Some one has said, with truth, that while medicine is a noble profession, it is the meanest of trades. Imbued with these sentiments, the founders of our Association, at the convention in 1846, resolved—"That it is expedient that the medical profession in the United States should be governed by the same code of medical ethics, and that a committee of seven be appointed to report a code for that purpose." A committee appointed in accordance with this resolution reported a Code of Ethics at the convention held in Philadelphia in 1847. This Code was adopted by the American Medical Association without a dissenting voice. It has remained essentially intact up to the present time, and it has been adopted by medical societies throughout the United States.

It were gratuitous to expatiate on the excellence of this Code. It speaks for itself better than any one can speak in its behalf. It has exerted a most salutary influence on the minds of the members of the medical profession in the country. It has promoted love of the profession, and self-respect as members of it, thereby contributing to its usefulness, its honor, and its true interests. I believe that a former President of this Association, Dr. N. S. Davis, uttered a correct statement in saying that in no other country are the principles and rules of medical ethics better observed than by the majority of the members of the profession in the United States,[1] and it is a reasonable conclusion that this is owing in a great measure to the influence of the national Code on the minds of the practitioners of medicine in our country. I concur with the speaker who addressed the Association from this chair, in 1882, Dr. Hooper, in the opinion that the American Medical Association, had it done nothing else than to adopt the Code of Ethics, would have been entitled to unending gratitude. I cannot forbear quoting some extracts from the address of a distinguished predecessor, the late Professor George B. Wood, in 1856: "A great benefit conferred on the profession by the Association was the preparation and adoption of the Code of Ethics." * * * * "I have no doubt that a full observance of its rules would tend more than any one thing else to maintain harmony in the profession and to elevate it in the public esteem." * * * * "I do honestly believe that to a young physician going forth into a life full of moral conflicts, the wearing of this ægis would be one of his surest defences; that next to the holy Scriptures and the grace of God, it would serve most effectually to guard him from evil."

It is only within a recent period that there have been anywhere manifestations of a disposition to change materially our National Code of Ethics, or to do away with any code. In 1882, at the annual meeting of the New York Medical Society, by a vote of 52 of 70 members in attendance at the meeting, a new code was summarily substituted for the Code

[1] Address at the Convention of Medical Editors, 1883.

of the American Medical Association. This precipitate and lamentable action has severed the New York State Society from its affiliation with our Association, and has resulted in a division of the members of the profession in the State of New York. That these results may not be permanent, must be the fervent wish of all who have at heart the usefulness, honor and interests of the medical profession.

Some of the recent opponents of our National Code object to it as antiquated, quaint, and containing useless platitudes. These objections do not call for serious refutation. They involve merely a question of taste, and the characteristics which by some are considered as blemishes, have for others a peculiar charm. Admitting that certain of the precepts of the Code are supererogatory, no one can object to them on the ground that they do harm, and if they be acceptable even to a few, wherefore should they be opposed by any?

Other objections are that the Code has, to a greater or less extent, proved inoperative, and that its rules are not enforced by means of penalties for the non-observance of them. The Code itself contains nothing in regard to penalties, nor do the By-laws of the Association take cognizance of these except to exclude from representation local societies which have not adopted the Code, "or which have intentionally violated or disregarded any of its articles or clauses." With this exception, the enforcement of ethical rules is left entirely to local societies. The fault, if fault there be, lies at the door of the latter. But, granting the fault to be ever so great and widely extended, is this a valid reason for formally repudiating obligations which are morally binding? Are the principles of morality pertaining to any of the duties of life to be ignored because immorality prevails? Are penal laws to be erased from the statutes because punishment often does not follow crime? Although few, if any, live up to the scriptural injunction to "do unto others as you would that they should do unto you," is this quintessence of religious duty to be expunged from Holy Writ? It is the salutary influence on the minds of members of the profession, in which consists the greatest potency of the ethical code for good; and I will go so far as to say that the Code were invaluable, were no penalties incurred by violations of it beyond those pertaining to the conscience of offenders.

The portion of the Code which is especially objected to, is that relating to consultations with irregular practitioners. The advocates of the "new code," so-called, in the State of New York, would permit consultations with all legally qualified practitioners of medicine. The advocates of "no code" would leave it entirely to individual judgment to decide with whom members of the medical profession should meet in consultation. After quoting the portion of the Code relating to this topic, I will ask your consideration of the views which I shall offer. The following is the article of the Code referred to: "A regular medical education furnishes the only presumptive evidence of professional abilities and acquirements, and ought to be the only acknowledged right of an individual to the exercise and honors of his profession. Nevertheless, as in consultations the good of the patient is the sole object in view, and this is often dependent on personal confidence, no intelligent regular practitioner who has a license to practice from some medical board of known and acknowledged respectability recognized by this Association, and who is in good moral and professional standing in the place in which he resides, should be fastidiously excluded from fellowship, or his aid refused in consultation, when it is requested by the patient. But no one can be considered as a regular practitioner or a fit associate in consultation, whose practice is based on an exclusive dogma, to the rejection of the accumulated experience of the profession, and of the aids actually furnished by anatomy, physiology, pathology, and organic chemistry."

The excluding clause, which is the last sentence, specifies who is not to be considered as a regular practitioner. No one, surely, will deny that a practitioner such as is specified in that clause, cannot be considered as a regular practitioner. The article does not assume to embrace a comprehensive definition of irregular practitioners. At the time when the Code of Ethics was adopted, the great majority of irregular practitioners were men who not only based their practice on an exclusive dogma, but made no concealment of their rejection of the "aids actually furnished by anatomy, physiology, pathology and animal chemistry." They made no pretension to knowledge of these branches of medicine, and they scornfully repudiated the "accumulated experience of the profession." The language of the article, which applied well enough to most of the irregular practitioners at that time, is not as applicable to those of a later date. It is not affirmed in the wording of the Code that holding an exclusive dogma is in itself sufficient for a practitioner to be considered as irregular. The language which refers to an exclusive dogma is to be taken in connection with the remainder of the same sentence. Exclusive dogmas have prevailed, to a greater or less extent, in past time, among members of the regular medical profession. Legitimate medicine places no restrictions on individual opinions; it does not assume to interfere with the utmost freedom in this regard. What is it, then, irrespective of a "rejection of the accumulated experience of the profession, and the aids actually furnished by anatomy, physiology, pathology and organic chemistry," which stamps irregular practitioners? Is it not the assumption of a distinctive name, such as homœopathic, eclectic, botanic, etc., voluntarily assumed as an announcement to the public of the adoption of a system of medicine distinct from, and opposed to, the practice of the regular profession, and on this distinction and opposition basing their claims as practitioners?

In order to make my meaning clear, let me illustrate it by examples. Within the recollection of those who have been in the profession for more than half a century, there prevailed simultaneously, for a time, two dogmas quite opposite in character, each having its ardent partisans. I refer to Broussaism and Brunonianism. Broussais and Brown were men of genius and learning, led astray by specious theo-

ries. They were honest in their opinions, and they sought to convince members of the profession, not the public, of the truth of their dogmas. Their partisans were often called Broussaists and Brunoiners; but they never assumed these names as sectarian designations. Now, had they assumed these names, making themselves known to the public as practicing Broussaism or Brunonianism, and on this ground basing their claims for practice, they would have been irregular practitioners not entitled to professional fellowship. As it was, they were not without the pale of the regular profession.

As a hypothetical example, *per contra*, suppose a graduate from a medical college of acknowledged respectability, whose professional attainments are sufficient to qualify him for membership of the regular profession, has adopted a sectarian name and allied himself with those who profess antagonism to legitimate medicine. He is, therefore, an irregular practitioner, whatever may be the particular tenet which is ostensibly the basis of his practice.

Let it be supposed that such a practitioner is desirous of being enrolled in the ranks of the regular profession. I need not say that this profession has no creed, no articles of faith, no traditional doctrines, which it imposes as conditions for membership. It enjoins no limitations of private opinion, it matters not how fantastic. In order that such an irregular practitioner as has been represented may enter the regular profession, no relinquishment of honest convictions is essential. In addition to educational and moral qualifications, the renouncement of a sectarian designation and of the hostility to the profession thereby involved, and conformity to the rules of medical ethics, are alone necessary. It is a calumny to say that persons are excluded from the medical profession on account of peculiar views, however irrational, and that conversion and recantation are essential for professional fellowship. The doors are closed to no one who has received a regular medical education, and whose conduct is governed by the rules of medical ethics.

It might prove a hazardous experiment to tamper with a Code of Ethics so complete and perfect as our national Code, and which has stood so well the test of time. Daniel Webster was accustomed to stigmatize efforts to amend the Constitution of the United States, or "attempts to tinker the Constitution." This pithy saying might be applied to propositions for altering our ethical Code. But it is safe and reasonable for interpretations of the Code to be authorized from time to time, in adaptation to circumstances as they arise; and I submit, as a recommendation, that the Association adopt resolutions embodying a more precise specification than the Code furnishes, of the grounds for refusing fellowship with irregular practitioners. This recommendation is in accordance with precedents. At the annual meeting in 1869, the Association adopted a resolution which recognized "specialties as proper and legitimate fields of practice." Herein was an authorized interpretation of the Code in adaptation to new circumstances. It was also resolved not to be "proper for specialists publicly to advertise themselves as such, or to assume a title not specially granted by a regularly chartered college." If there be the least room for uncertainty, let it be specified distinctly that the adoption of a sectarian title is not merely a violation of medical ethics, but a voluntary disconnection from the regular medical profession, and that professional fellowship is thereby not only inconsistent with self-respect, but prejudicial to the usefulness, the honor and the true interests of the profession.

I believe I do not err in saying that those objections made to the Code of Ethics which call for serious consideration, betoken either an inadequate appreciation or an erroneous construction of the Code, and therefore such objections can be removed by authorized interpretations, which being simply explanatory, without involving essential changes in the Code, are not subject to the provisions for amendments of articles embraced in the Constitution and By-laws of the Association.

I must pass cursorily over the remaining objects for which, as enumerated in the preamble to the plan of organization, our Association was instituted. The means for "enlightening and directing public opinion in regard to the duties, responsibilities and requirements of medical men; for exciting and encouraging emulation and concert of action in the profession, and for facilitating and fostering friendly intercourse between those engaged in it," furnish many topics which, if time permitted, would claim consideration.

Every member of our profession is often made painfully aware, not only of apathy but misapprehension, in the public mind, as regards our duties, responsibilities and requirements. The popular diffusion of our Code of Ethics, allowing it to speak for itself, would go far toward the removal of many errors in regard to our profession. A valuable service, not less to the public than to the profession, might be rendered by proper efforts in this direction. In this way the public may perhaps be led to understand and appreciate the rules of etiquette for which we are often held up to ridicule; our opposition to secret nostrums, and patented discoveries and improvements, and our refusal of fellowship with irregular practitioners. Recurring to the last named topic, many suppose that fellowship with those who are not of the regular profession is refused either from a false sense of dignity or from prejudice, regardless of the dictates of humanity. Now, the ethical code neither in letter nor spirit inculcates nothing in conflict with the humane exercise of our calling. This is a superfluous assertion to those familiar with the teachings of the Code. The principle of humanity underlies all its practical precepts. Quoting words which have been already quoted, "The good of the patient is the sole object in view." There are circumstances under which the higher law of philanthropy, placing in abeyance those rules of the ethical code, as well as of etiquette, which under other circumstances claim obedience, not only permits but commands members of the regular profession to bestow their professional services without stopping to ask whether a practitioner with whom chance has brought

them into association be, or be not, a "fit associate in consultation." Under such circumstances, association with an irregular practitioner, governed by a supreme regard for humanity, involves neither fellowship nor professional application, and it is to these alone that ethical restrictions apply. Let it not be conceded for an instant that there can be any antagonism between humanity and medical ethics. Nor is it difficult in particular instances to decide, practically, in what way the dictates of humanity are to be harmonized with ethical rules. Regarded in the light derived from both these sources, the path of duty is sufficiently plain. Any act honestly performed purely for a humane purpose, cannot but be consistent with the principle which underlies our admirable Code of Ethics. But it is to be added, professional association with those who, in the language of the Code, are not "fit associates in consultations" except in emergencies when philanthropy, for the time being, abolishes all restrictions, contravenes the humane objects of our profession just so far as the useful applications of legitimate medicine are thereby trammelled or curtailed. If it be inhuman under certain circumstances to decline association with irregular practitioners, it would be equally or more so, under other circumstances, to make those concessions which professional fellowship requires to practitioners who profess hostility to medical science and to the regular medical profession. The refusal of fellowship and affiliation with irregular practitioners, thus, is sanctioned, not only by a sentiment of self-respect, and respect for our profession, but by a proper regard for the dictates of humanity.

The work in the several Sections of our Association is of importance, aside from its intrinsic value as a means for "exciting and encouraging emulation and concert of action in the profession." Now that whatever is here done is speedily laid before the profession through the medium of the weekly journal, it is to be hoped that there will be a larger attendance and greater activity at the meetings of the Sections than hitherto. It is here that efforts are to be made for the advancement and diffusion of medical knowledge. On the results thereof must be based the estimation in our own country of the usefulness of the Association, and its rank as compared with sister associations in other countries. In short, we shall contribute to the true success of the Association, as we increase by our attendance and coöperation the value of the sectional work.

Our Association, both by precept and example, has aimed to facilitate and foster friendly intercourse between those engaged in the practice of medicine. The opportunities for the renewal of old and the formation of new friendships, and for social enjoyment are, in themselves, sufficient to render the meetings of the Association of great value. Let us continue to cherish this last one of the several objects for which our Association was instituted, so that, in this point of view, to the enjoyment of its meetings, may be added the pleasures of anticipation and of retrospection.

Our efforts to facilitate and foster friendly intercourse between members of the medical profession, as well as to promote the development and diffusion of medical knowledge, should not be limited to our own country. As the means of union for these objects of the medical profession of all countries, the meetings of the International Medical Congress claim a warm interest. The meeting of the Congress in London, in 1881, will ever be memorable in the retrospections of its members, and they who expect to attend the meeting at Copenhagen in August next, may anticipate much enjoyment as well as improvement. It would prove, as I doubt not, a source of great gratification to the profession of our country if the meeting of the Congress in 1887 were to be held in the United States, and I suggest the propriety of action to be taken now with reference to this desirable end. Inasmuch as an invitation should be in behalf of the profession of the whole country, and not of any particular section, it appropriately should come from the American Medical Association. If the suggestion be favorably received, it seems to me advisable that a committee be appointed with instructions to convey an invitation from this Association through its delegates to the Congress at Copenhagen. The committee may also be empowered to designate the time and place of the meeting of the Congress in 1887, and to take such other preliminary steps as may appear to the committee to be requisite.

My suggestion in regard to the International Congress is not made solely on my own responsibility, but at the instance of several well-known for their active interest in the welfare of the American medical profession. By one of the most eminent of these, I was requested, quite recently, to make the suggestion, in a letter written with a hand tremulous from the serious illness which has deprived the Association of his presence at this meeting; one whose absence is a disappointment to many who were desirous to behold once more the genial, benignant countenance which has hitherto greeted us at our annual meetings; one whose writings have made American surgery illustrious, who is revered by the many thousand practitioners who have listened to his instructions, and who is honored, not only in our own country, but in other countries, as no member of the medical profession in America was ever before honored; one admired by all who have known him, and beloved by those who have enjoyed the privilege of his friendship. I know that I speak the heartfelt sentiment of every one who hears me, and of our brethren throughout the whole country, when I address a fervent wish that Prof. Samuel D. Gross might be spared yet many years to his family, his friends, and the profession which he adorns.

Brethren of the American Medical Association:

I congratulate you on your presence at this annual meeting. It is peculiarly gratifying to meet together in this city, the Capitol of our Government, in which there is so much of interest to us as American citizens. There is also much that is attractive in a professional view. We have the opportunity of forming and renewing acquaintance with the eminent members of our profession residing in this city and vicinity. Here is the Army Medical Museum, the

largest and most complete collection in existence of the results of gunshot injuries and of the diseases of armies. It is rich in illustrations of craniology and comparative osteology; and its specimens cover the whole field of medicine and surgery. Here is also the National Medical Library, the largest exclusively medical library in the world, and, as a practical working library, the most valuable, owing to its immense collection of periodical literature, and the manner in which it has been indexed and catalogued. All praise and honor to the medical officers connected with the office of the Surgeon-General, to whom our profession and the country are indebted for the labor and skill that have made our National Medical Library and the Army Museum institutions of which we may justly be proud! Let us hope that Congress will not much longer delay in providing a commodious fire-proof building for the reception of the valuable collections which it would be impossible to replace, and which are of the greatest importance to the progress of medical science and education in this country.

The Naval Museum of Hygiene, although of recent growth, will be found to possess an interesting collection illustrating sanitary science, together with a good library. The National Museum and the Museum of the Department of Agriculture contain also much that is of interest to members of our profession.

To my congratulations are to be added my thanks for the great honor conferred on me by my election to the Presidency of the Association. My grateful appreciation of the honor is enhanced by the fact that I did not seek nor desire the office. I should have been glad had the selection fallen on one better prepared to perform the duties of a presiding officer. I can only say that, relying on your indulgence and forbearance, I shall discharge these duties to the best of my ability.

May this thirty-fifth annual meeting of the Association be characterized by harmony and good feeling! With the blessing of Providence, may its proceedings strengthen the attachment of the American medical profession to the Association, extend the boundaries of our knowledge, and promote the welfare of mankind!

ADDRESS ON PRACTICAL MEDICINE.

BY JOHN V. SHOEMAKER, M.D., CHAIRMAN OF THE SECTION ON PRACTICAL MEDICINE AND MATERIA MEDICA, MAY, 1884.

Gentlemen of the American Medical Association:

A year ago you conferred upon me the honorable position of Chairman of the Section of the Practice of Medicine, Materia Medica, and Physiology of your Society. As Chairman, it is made imperative upon me, by our By-laws, to lay before you a *résumé* of the progress made and the new discoveries announced in these branches of our science during the past year. The responsibility of this duty, in view of the numerous investigations and important discoveries by the members of the medical profession throughout the civilized world, and the steadily increasing volume of medical literature, etc., renders the task more and more difficult with each succeeding year; for as new theories arise and supplant older ones, they, in turn, will be superseded by others yet unheralded. The unbiased gleaning of what has been done is a feat of no mean proportion, and if I should not do full justice in my criticism of any particular one, or in the mention of others, I beg your indulgence in advance.

Medicine, at the present time, has a tendency to elevate itself beyond the narrow sphere occupied by it years ago. Empiricism is no longer recognized. The ultimate investigation of the cause of disease, and the remedial measures suited to it, seem the absorbing object. While our present scientific system of medicine has many followers among the sectarians, sprung from its maternal lap, it still stands proudly alone, brighter and fairer in its record than ever before. The scepticism which has arisen from heresy has had a most salutary and purifying influence on it, and has led us, again and again, to review the course we are pursuing, in order to be assured that there is no deviation from the right direction.

Sceptics hold that with all our efforts, no advance has been made upon the inroads of disease, and that mankind is as much subject to its influence as when medicine blindly groped its way. This allegation I most certainly deny. No longer are whole continents devastated by disease; no longer are epidemics the terror of nations, nor countries made uninhabitable to the human race; for with an intimate knowledge of disease and its origin, scientific medicine has adapted measures to its stay, its relief, and its extermination. And all this has been done notwithstanding population is steadily increasing, and with it, also, the danger of contamination from disease-breeding germs, multiplying at an unduly increasing ratio; that the desire for social intercourse makes itself manifest by closer congregation in localities illy suited for hygienic protection; and with it the stationary, if not reduced rate of certain classes of complaints, must certainly be regarded as a veritable triumph for medicine, and the necessity for continual effort for its advancement.

The means for making medicine more thoroughly understood and serviceable are, without doubt, the general distribution of its principles and conditions by the wide development of medical literature. A great source of satisfaction is the high standard which it has attained with its wide diffusion, thus enabling the physician everywhere to be in close intellectual communion with his fellow-workers. The time when medical knowledge was kept a family or a trade secret, was less productive of true medical advance than any other period of man's existence. With the universal spread of knowledge alone has medicine risen from empiricism, until to-day it may be called a scientific system indeed. It is a matter of congratulation that this great, and the most prominent,

association of practitioners of medicine of our country has launched a journal, which has taken the place of the time-worn Transactions, in which the valuable investigations of the members of our Association were quietly buried. Not alone has our science been advanced by the improved and increased periodical medical literature, but numerous publications on special subjects and branches have appeared during the past year, which have been largely instrumental in promulgating and advancing new theories.

It is the studious investigator, however, who, with untiring zeal and devotion, has disinterestedly employed his time in the study of health, disease, and its curative measures, that medicine has to thank for its principal advancement during the past year. The student in the laboratory, at the microscope, as well as in the actual field of devastating epidemics, is the benefactor of whom too much cannot be said in praise. While it is not our province to enumerate or name them here, it becomes certainly our duty to mention that noble hero, Dr. Thullier, of Paris, who, with the French Cholera Commission, penetrated into the very pest-houses of Egypt to serve the cause of medicine, and gave up his life there, a victim for our enlightenment. His memory should be a lasting one with physicians all over the world as a substantial monument in connection with many other great heroes in our ranks.

PHYSIOLOGY AND PATHOLOGY.

I can say but little of the progress of physiology during the past year. The field is one of vast expanse, and the observations that have been recently put forth have not, as yet, stood the test of time, so necessary in this branch of our science.

In the field of pathology and pathological research the study of the infinitesimal has attracted great attention. Humeral pathology of old has had its day. Anatomico-pathology now seems fast to lose its hold upon our workers, in view of the discovery of the constant appearance of micro-organisms as concomitants of special types of disease. Grosser lesions appear to have lost their interest and importance in comparison with the invading hosts of parasitic enemies to the organic structures. Though their presence was known for years, as has been demonstrated by older observers, we are riding now on the very crest of the billow of excitement that they are creating in medicine. *Tempora mutantur!* Will it be rash to predict a downfall of the omnipotent rule of these minute Vandals who overawe us with their menaces? That they exist there is no longer any reasonable doubt. They have been demonstrated, classified, propagated, and shown to be constant with certain features of tissue changes. Their causative influence is as yet a matter of grave doubt, and one that in accordance with close observation will probably not be soon cleared up. If all that their enthusiastic discoverers and experimenters claim proves true, medicine will resolve itself into a system of micro-botany, leading to the study of the character and habits of its subjects, and the antagonistic elements to their existence.

Of the subjects prominently brought to the attention of the profession and exciting universal interest, more than any other is that of the bacillus theory of tuberculosis and its contagious character. While the presence of micro-organisms in other diseases is being investigated and studied extensively, there is none which has as great a bearing and caused so much comment as this one. Only a few years ago Koch stood almost alone in its advocacy. Now there are numbers of unbiased observers who confirm his famous discovery. Foremost among these is Watson Cheyne, who visited Koch's laboratory for the express purpose of investigating the subject. His report fully confirms the facts set forth by the great investigator, besides demonstrating the constancy of the occurrence of bacillus in all tubercular structures, as well as the relative position of the parasitic organism to cell-structure. Similar confirmatory evidence has been produced by Pruden, Dreschfeld, West, Gibbs, Heron, Wipham, Meissen, and others, from a clinical view of the constant presence of the bacillus in the sputa of phthisis; while Charnley Smith has even ingeniously demonstrated its presence in the expiratory air of consumptives by filtering it through gun-cotton, dissolving it in ether, and then fixing it on microscopical slides for inspection.

Dr. Austin Flint, Sr., accepts the new theory as well as the ætiological character of this micro-organism when added to predisposition, leaving the subject of contagion dependent upon the causative element combined with the favorable soil for its propagation, ascribing the usual absence of contagion to a lack of predisposition, and considers the presence of the bacillus as one of the most essential elements for the diagnosis of phthisis. Drs. Janeway, Welch, and Peabody, well-known authorities on this subject, concur with Dr. Flint in his views; likewise Dr. H. C. Ernst in his contribution presented to the Massachusetts Medical Society, besides numerous other investigators, both here and abroad.

The presence of the bacillus has been observed in other tubercular lesions than the lungs: as in the mouth and soft palate, by Guttmann and Finger; in the skin by Cornil; in lupus by Demme; in the uterus by Lindsey Stephens; in the urinary tract by Rosenstein, Babés, and Cornil, as well as in rectal abscesses by Smith. Dr. Wilson Fox admits the fallacy of his former experiments, and accepts the theory of the contagious character and inoculability of the virus, and that injury to the rodents is not followed by tuberculosis, as previously expressed by him.

Now, while the adherents to Koch's theory have increased wonderfully, there are those not wanting who are open in their criticism, and opposed to the acceptance of anything like a bacterian origin of tuberculosis or other diseases. Their opposition is not based merely upon assertions or clinical evidence, but the result of years of observation and experiments conducted here, as well as at the very birthplace of the bacillus theory. Amongst those most prominently arrayed against it are Spina, of Vienna, Finkler, and Eichler, who pronounce the staining methods of Koch as fallacious and misleading, while Feltz admits his failure with cultivation by following Koch's method.

Formad, in this country, has made a most vigorous

attack upon it, and has referred the ætiology of tuberculosis to histological changes rather than to parasitic invasion, in which deduction he is supported by many eminent pathologists, such as Longstreth and others. In his denial of the contagiousness of tuberculosis he is in accord with the opinions of Virchow, Recklinghausen, Stricker, Gull, Williams, Watson, Paget, Humphrey, Richardson, Bennet, Hiram, Corson, Trail Green, N. S. Davis, H. F. Campbell, and others. Thus, it will be seen that this subject is by no means disposed of yet; and it will undoubtedly form one of the main and interesting points of our discussions at this meeting, in which some of our most prominent pathologists, practitioners and teachers have promised to take part.

The bacillus tuberculosis theory, however, is not the only one that has excited attention. The bacterial origin of other diseases has been earnestly advocated as well. Thus, a micro-organism has been found and studied by Friedländer as a micrococcus of pneumonia, possessing distinct capsules under certain conditions and at certain stages, which he verified by cultivating processes and inhalation of impregnated air, and was enabled in that way, in certain animals, to produce red infiltration of the lungs, and evolved reddish infiltration of the pleura. The capsule was easily seen by means of staining fluids, but does not exist in the cultivated micrococcus, but seems to be reproduced in the experiments upon animals, and appears to be mucin. Though reported before by Giles in the blood of pneumonic patients, where Friedländer failed to see them, they were conclusively demonstrated by cultivation and inoculation to exist. This may serve to explain the occasional epidemic form of pneumonia in certain localities. Buchanan and Russell have described cases of infective pleurisy in which micro-organisms appeared in the effusion. A bacillus of syphilis has been described by Morison, of Baltimore, as occurring in chancres, condylomata, etc., but apparently different from that described by Birch-Hirschfeld; while the micrococcus of gonorrhœa has been cultivated by Burckhart, as well as Sternberg, and successfully inoculated. Again, micro-organisms have been found and claimed as the cause of pertussis, while cases of nephritis and purpura have been attributed to the same cause, and even the vesicles of impetigo contagiosa and herpes labialis, it is asserted, contain them. A micro-organism is said to have been detected in the blood of patients ill with typhus; and Marigliano appears to confirm Klebs and Eberth as to their presence in the blood of the spleen of typhoid-fever patients. The bacillus of leprosy has again been reported by Hausen and Thin, as well as that of scarlet fever by Crooke. The discovery of the bacillus of glanders by Bonchance, Schutz, and Lœffler has been confirmed by successful inoculation. Erysipelas has been demonstrated by Fehleisen to be due to the growth of micrococci in the lymphatics of the skin, and by inoculation and cultivation he successfully introduced that affection both in animals and man. The work of Pasteur and Koch has been directed with success toward the study of the attenuation of virus; and the latter's labors, as head of the German Cholera Commission sent to Egypt and India, have been crowned by the discovery of the specific micro-organism of cholera. The constant presence of the cholera bacillus in the intestines and ejecta, seems to leave no doubt as to the important part they take in that scourge. While Prior has found a micrococcus in the coats of the intestines and stools of dysentery, and numerous organisms have been for years declared to be the cause of cholera, it is due to Koch, for his special skill in this field of research, to accord him the honor of the detection of the special micro-organism, to which may be fairly attributed the pathological changes in these structures.

That the origin of yellow fever should arise from this same cause is readily obvious, when we consider its infectious nature. Though this has been claimed to be the case by Carmona del Valle, and called by him "peronosperma lutea," there seems to be little tangible evidence for it aside from the experiments of Domingos Freire, of Rio de Janeiro, who showed, experimentally, that blood of dead yellow fever patients, inoculated into animals, caused rapid death; and that their blood had, in turn, similar effects. He attributes this to the presence of a cryptococcus, for which he proposes the name of cryptococcus xanthogenicus; and which he also claimed to have found in the earth of infected districts. While these demonstrations prove scarcely anything without proper cultivation and successful inoculation, they point, nevertheless, to a fruitful field for research.

MEDICINE.

Medicine, in a word, comprises everything relating to the healing art; necessarily we will have to give it here a closer meaning in its relation to clinical observation only. The pathological conditions, so nearly allied to it, we have treated of before. The treatment of disease we shall speak of hereafter. Hence, it remains but to call your attention to new phases of disease, of their diagnostic characteristics, and their prognostic chances.

The knowledge of nervous affections, though it has not progressed with the giant strides of other branches of disease, is steadily advancing and emerging from its mysterious enfoldings. The localization of cerebral functions, though now generally accepted, has advanced us practically but little, though the trephine has daringly opened to the neurologist the hidden regions of dura mater and gray matter. Locomotor ataxy has presented in its chronic state three diagnostic points for distinction: that of Duchenne, with the characteristic symptoms depending on the lesions of the columns of Burdach; another depending on diffuse sclerosis of the chord and medulla oblongata, although principally limited to the posterior columns of the former, differing from it by its first occurrence during puberty—sensibility not being affected until late in the disease—and that the uncertain gait and step is not increased by shutting the eyes. A third subdivision is made of the ataxy of the periphery, described by Dejerine as an atrophy of the peripheral sensory nerves.

While the treatment of the insane has so vastly improved, it is to be regretted that our knowledge of

the ætiological factors of psychical disease does not keep pace with it, and from this cause, no doubt, arises the difficulty experienced in the diagnosis of such cases, which give rise now and then to conflicting opinions in law courts, and which are interpreted to the great disadvantage of medical science. The interesting experiments of Brown-Sequard on reflex irritation, and the production by it of profound anæsthesia, bordering on catalepsy, should throw some light on the unravelled secret of hysteria and its allied affections.

The investigations and researches in the bacterial origin of phthisis would of necessity call for a reorganization of its clinical aspects. It has attracted the attention of eminent scientists, both pro and con. The bacterial development from extraneous sources would constitute it as contagious *per se*, and be in accord with the theories of its advocates; while those opposed to it have most ingeniously brought forward arguments, which, if substantiated, would upset our principles of organic law. The origination *de novo* of the bacillus, as claimed by Bouchardt, would depend on metamorphoses, no longer admitted, and certainly not understood nor explained. Guerin, in supporting his doctrine, admits its transmissibility by classifying the tubercular structures as one non-transmissible and another transmissible; although the latter he holds communicable only through putrid infection. After all, these arguments fail to meet the issue, which, in view of the wide spread of this disease, is of paramount importance, in so far as it forms not alone the indication for antiseptic treatment, but the development and propagation of the disease itself.

Typhoid fever has arrested the attention of the profession to some extent, with a view of learning the real danger hidden in it, which is now almost universally conceded to be the accompanying hyperpyrexia, giving rise to the tissue changes. Excretion of nitrogenized material, and non-assimilation of the modification of these under the antipyretic treatment can be accepted as a guide to this conclusion. The treatment by cold baths, of all antipyretics, is now thought to be the most serviceable, if we can trust to the statistics of recent investigators, as well as the thorough researches of Sassetzky in the analyses of the excreta. If, as is stated, the mortality caused by enteric fever in London was ordinarily from 15 to 18 per cent. of the population, and that it has now been reduced by means of the cold water treatment to about 10 per cent., it must certainly be regarded as a great improvement.

Of renal diseases, albuminuria has long been the subject of scientific inquiry, being considered more and more of nerve origin. Its close relation to diabetes, with mutual interchange in certain affections, has brought forward the proposition that both albuminuria and glycosuria may be produced by irritation of certain parts of the floor of the fourth ventricle. And the proposition is well established.

The hypertrophy of the muscular coat of the arterioles, and the increased tension of the vascular system, are also claimed to be due to irritation of the vaso-motor centers of the medulla. The latter especially has proved valuable in modifying the treatment of albuminuria. The neural influences seem primarily, and the renal disorganization from distension of the glomerular vessels progressive steps therefrom. That the toxic influence of certain substances, as well as severe febrile affections, is productive of albuminuria is well known, and a recent instance has been cited where it occurred after varicella. Peptonuria has been investigated and found to co-exist with suppuration from various causes, or with large exudations. Jaksch claims that it is due to the reabsorption of inflammatory products rather than to any pathological condition of the kidneys. The examination of urine for the purpose of detecting pathological products has probably further advanced during the past year than ever before. The old and common tests by nitric acid and heat are said to lack delicacy, and do not indicate albumen unless present in large quantities. The acidulated brine test, the tests with picric acid, Tanret's or potassio-mercuric, the sodium tungstate, the potassium ferrocyanide tests, in their solid or liquid form, or spread on paper for convenience sake, have no doubt their advantages, especially in point of delicacy, so that they seem an improvement on the older methods; but this very delicacy will, at times, mislead the practitioner, who, by the presence of peptones, mucin, urates, and medicinal bodies may form a hasty and erroneous diagnosis; besides, albumen might be detected as a normal constituent of the urine, when the older methods properly applied would serve as an indication of pathological change only. A question of greater importance for the medical chemist to solve is rather as to the quantity of albumen present, than to discover its probable incidental existence. The same may well be said of the new tests for sugar, such as diazobenzol-sulphuric acid, citric acid and indigo, only that they do not mislead, but serve well for qualitative tests at the bedside. For quantitative tests there will probably few outrival the older methods, or the easily applied and accurate polariscope.

The subject of myxœdema has received new impetus with our confréres abroad, both through the pathological researches of Henrot and of Kocher, in connection with the extirpation of the thyroid gland in a number of patients who subsequently showed a cretinoid condition, and the confirmation of an atrophied state of this gland in subjects of this disease. If the committee of the London Clinical Society, having this matter in charge, will solve some of the points concerned, it will shed much interesting light on its functions.

The disease known as actinomycosis, and described by Ponfick as peculiar to horses and cattle, has been exhibited by Treves in a man, whom he brought before the London Pathological Society. All stages of the disease, from minute solid growths to large suppurating and sloughing masses, were present.

The grave accusation cast against American pork by some of the European authorities makes it necessary that I should say a few words here upon the subject. Trichinosis is with us a very rare disease indeed, in comparison to its frequent occurrence in

Continental Europe. In spite of the prohibitive edict against our pork in Germany, quite an endemic of trichinosis has prevailed there of late. As there have been isolated cases reported with us, I will therefore refrain from any attempt at defence, but simply remark that the mortality from trichinosis in this country, in comparison with Germany, would lead us most certainly to discriminate in favor of our product to that of the foreign—even if we do not attribute our comparative immunity to the more civilized manner in which we partake of it than the semi-barbarous fashion of eating it uncooked. French physicians, in the Academy of Medicine, of Paris, have already given their opinion that American pork is not as dangerous as the trichiniphobist would have us believe, and recommend that the prohibition to its importation be removed.

The epidemics of small-pox, which for some years have swept over this country, and have visited almost every town and hamlet, have considerably abated, but few cases, comparatively, being reported now. The questions, if the disease has exhausted the material for its propagation, or if the vigorous vaccination insisted upon by the medical profession, has successfully stayed its ravages, are points which are not yet settled. Again the subject of a common origin of vaccinia and variola has been brought forward, and Voigt states that variola is inoculable into cows, and if used for protective inoculation with man it is equivalent, and even preferable, to vaccine, provided that the virus be far enough remote from its first source, else variola, with all its characteristics, may be developed.

In regard to scarlatina much interest has been attached to its prevalence among animals—as the horse, cat and dog. It has been claimed that contagion was carried both from them to man, and *vice versa*. The pinkeye of horses has been stated to be in many cases nothing else than equine scarlatina, readily contagious, while cases are cited every now and then where the source of the disease unmistakably pointed to the domestic feline or canine pet. Of the greatest interest herewith are the experiments of Stickler with the inoculation of the nasal mucus of horses, suffering from scarlatina, into rabbits and dogs, which produced a modified scarlatiniform exanthem, accompanied by fever and some enlargement of the glands. Blood, from a case of confluent scarlatina, afterwards inoculated in those animals, failed to bring any results. Stickler repeated the same experiments on twelve children, but failed to produce scarlatina in any of them by inoculation with scarlatinal blood, and arrived at the conclusion that the subcutaneous injection of scarlatina virus from the horse is not followed by harmful results, but that it produces a circumscribed eruption like mild scarlet fever, and that such inoculation confers an immunity from scarlatina.

The epidemic which excited the most alarm in its disastrous results, and caused the greatest anxiety as to its spread, was the late outbreak of cholera in Egypt. That country is proverbial for its filth, and, as a consequence, its prolific breeding of epidemic diseases. Although cholera has periodically visited both this country and Europe, its terrible fatality has never been felt so severely as in Egypt, which has suffered from its late outbreak there. The lack of proper drainage, and the use of water contaminated with offal and excrementitious material, are well calculated to give impetus to this disease. From the reports of Sir William Hunter and other gentlemen of the European Sanitary Commissions, we learn of the most loose and incomplete hospital arrangements, while the harshness of its quarantine enforcements arises more from individual egotism and fear than the desire to stamp out the germs of the disease, which are hatched by the stifling heat, from the filth and offal exposed everywhere to view, and offending the nostrils at every step.

Yellow fever, as usual, made its appearance in some of the Southern ports, and while it showed a tendency to a malignant character, and indeed produced great ravages in the Pensacola Navy Yard, it is due to wise quarantine laws, and to the unflinching energy of the surgeons in charge of our naval and marine hospitals, that the disease was not represented in a palliative light, and thus allowed to spread beyond its original cordon. Much praise is due to Dr. Guiteras, of the Navy, for his moral courage in facing the issue in its true light, and thus sparing the South the disastrous experiences of former years. The attempts to fight yellow fever by calling it by another name are fraught with disastrous consequences, and should under no consideration be countenanced. That it is both infectious and contagious can no longer be denied, and, if not accompanied by urinary suppression, it is a disease which otherwise shows a fair percentage of recoveries under proper treatment.

THERAPEUTICS.

It may be said of therapeutics, that while in past years they were ignored to a great extent by many physicians and scientists, they have undoubtedly now assumed new features entitling them to a prominent position. Promiscuous dosing and empirical drugging are no longer recognized, but the application of the physiological action of remedial substances to a pathological condition are the therapeutics of the present and the future.

Among the permanent remedies which have found approval during the past year, there is probably none of greater interest than what promises to be one of the most powerful and reliable antipyretics, a rival to, and perhaps surpassing in its effects as a febrifuge, quinine. It is called kairin. Although it has as yet found but little practical application in our own country, the reports concerning it from abroad are such as would make it desirable for us to give it a thorough, practical test. It may not be all its admirers claim for it, but enough has been learned to place it prominently in the class of antipyretics. It was discovered by Dr. O. Fischer, and described chemically as an oxethylquinoline hydrid hydrochloride, a coal-tar derivative. It was investigated by Filhane, Sassetzki, Knipping, Girat and Guttman, with satisfactory results, while Reigel reports adversely as to his success. Notwithstanding the favorable properties it undoubtedly possesses to reduce fever temperature, it should

be exhibited with caution, on account of its cardiac depressant action. Although it promises a remedy of the greatest value, sufficient investigation as to its physiological effect seems to be still wanting.

Another very interesting remedial substance which has been presented to the medical profession as experimented with, is the paraldehyde, a substance isomeric with aldehyde. It is asserted by Dr. Langreuter that it possesses powerful hypnotic properties, with no abnormal phenomena excepting a slight and irregular pulse. The sleep produced by it is readily induced by doses of about six grams (1½ drachms), generally giving a full night's rest, and when sleep is not produced, still a quieting influence is exercised. It is claimed for it, that it produces no cardiac depressant effect, but from its chemical source this seems doubtful. Dr. J. C. Wilson's experiments in this respect corroborate the above views. It is also claimed for it that a lethal dose suspends the functions of the medulla, and the action of the heart ceases after respiration; likewise that it acts upon the cerebral hemispheres, inducing sleepy drowsiness without preliminary excitement. While cardiac depression from it has been observed, it is said that neither nausea, depression, headache, constipation, nor other unpleasant after effects are produced by its use. It has a controlling action over some branches of the fifth pair of nerves, and seems to correspond in this effect to one of its derivatives—butychloralhydrate, or the so-called croton-chloralhydrate. While no doubt a useful hypnotic, it seems scarcely destined to supplant chloral for that purpose. Its close identity with the latter, however, therapeutically, is its antagonism to strychnine, and *vice versa*, for which property it has been studied and observed by Professor Cervella, who demonstrated that the seat of the opposing action is the spinal cord, the reflex irritability of the medulla oblongata being increased by strychnine and decreased by paraldehyde.

By far the most useful, as well as the most interesting effect produced by any new therapeutic agent given to us during the past year, is the *Abrus precatorius*, the jequirity bean of Brazil. The remarkable virtues of this drug have not alone been due to the curative effect it has exerted when applied as a remedy for pannus and other eye affections, and for which it has been reported as being a most extraordinary curative agent, but principally to the fact that in it we have pressed into our service the ubiquitous microbe, which is receiving at the present time so much attention. Sattler has proved beyond a doubt, that the watery infusion of the substance is a culture fluid, a nutrient field for certain atmospheric germs, which derive therefrom their pullulation, confirming the theory of Pasteur of the agency of ærial microorganisms in bringing about fermentation and morbid changes. That this is not mere speculation was again confirmed by the experiments of Cornil and Berlioz, who produced, by hypodermic injections of the infusion of jequirity, inflammation with suppuration and gangrene of the skin in rabbits, frogs, etc. Those animals which survived were not affected by a second operation, which has led some to the conclusion that the first had acted similar to a vaccination. In animals to which the infusion was given in only a fourth of a drop, injected into the pleural or peritoneal cavity, it caused inflammations, and the microbes were found throughout their circulation in immense quantities. A drop of their blood injected in turn in a frog set up septic infection, and caused the presence of numerous microbes, but if the bean were given as food no infection occurred.

A matter of interest in therapeutics of the past year was the investigations of DaCosta in regard to the salts of nickel, and especially its bromide. While the other salts proved of little, if any value, this bromide was found to possess the properties of the bromides generally, but in much smaller doses. It is claimed that it lowers the temperature, does not influence the pulse, nor affect the excretions; that it is a nerve sedative, without exercising a weakening or depressing influence, and of especial value in epilepsy.

The bismuth salicylate is also a new arrival among us, which has been used in the treatment of various forms of diarrhœa and typhoid fever; the latter disease, it is asserted, it will abort under favorable circumstances, but this claim needs further confirmation.

Nitroglycerine has again come to the surface, and new and striking results, as well as a larger sphere for its action has been developed, along with the closer study of its physiological action. The opinion of Robson in regard to its value in acute and chronic Bright's Disease has been confirmed by its action on the vascular apparatus. Its effect in albuminuria has been recently investigated by Bartholow, who states that it reduces the vascular tension more than any other remedy; lessens the work of the heart by removing the inhibition exercised by the pneumogastric nerve; and that by its action he has not alone seen remarkable instances of relief, but even permanent cures. In angina pectoris it seems second only to amyl nitrite; and while it does not arrest the paroxysm as promptly as the former, it possesses a curative action, and can be used to prevent future atacks. For that purpose it is given daily to restore the diminished vascular pressure. The results attained with this agent, and the study of it along with the nitrites as a class, and their effect upon vascular tension, has recently developed remarkable and interesting facts in regard to one of this class, the sodium nitrite. The dose of it had been stated as about twenty grains, given for a long period with impunity. It appears that this applied to an impure article; that the pure sodium nitrite is possessed of powerful and even toxic action, as reported by Ringer and Murrell, and the commencing dose should not exceed two grains. In connection with this subject it is proper to allude to the controversy arising from the publication of the experiments of the gentleman last named.

Dr. Murrell was severely attacked for his wanton experimentation, as it was termed, on hospital and charity patients, not alone by laymen, but also by members of his own profession. Just how these gentlemen expect to derive knowledge without "experimentation," is not obvious. Perhaps they would have preferred to have been the victims of an erro-

neously stated dose than to have the truth developed by scientific research. Dr. Murrell is entitled to the thanks of the profession for his demonstrations and important deductions, rather than virulent abuse; for with a cessation of "experimentation" the progress of medicine must also cease.

Recent investigations in the treatment of albuminuria, by Bartholow, also show the great utility of the chloride of gold and sodium in this disease, both in the subacute and chronic form. He states that "the earlier it is given the better, if structural changes are to be prevented or arrested, and its curative action will necessarily depend on the extent of the damage already inflicted on the kidneys."

It is well to mention, also, that among others, attention has been directed to the following remedies: Hyperosmic acid seems to have attracted notice, both for parenchymatous injections in tumors as well as for obstinate neuralgia. Convallaria majalis and its active principle, convallamarin, after a thorough test is, according to Robson, inferior to digitalis in its action. The digitalis group, though not definitely limited, seems to have been positively defined as contracting the blood-vessels by their effect on the involuntary muscular tissue of these organs. Hypodermic injections of pilocarpine in myxœdema are reported as being very useful. Barium chloride has been studied physiologically, and while its therapeutic value is undetermined, it is proved to possess a powerful action quite different from the calcium chloride, with which it has been classed, and its resemblance in its action to digitalis is confirmed. Croton oil has been found to consist of two therapeutically different principles, one of which represents a safe and useful laxative, while the other is stated to be a vesicant and intestinal irritant. The use of potassium permanganate, hypodermically injected as an antidote for the bite of the cobra and other venomous snakes, has again been brought forward, and though its efficacy has been doubted by some, by others it is asserted that if immediately or shortly after being bitten it is injected into the area of the wound, it will neutralize the poison, while it will not counteract it when reabsorbed and constitutional symptoms have set in. In connection herewith, Sir Joseph Frayer, who has made an extensive research into the nature of snake poison, states in a recent communication before the Medical Society of London: "The result of my experience is that, so far, no physiological antidote to snake virus is known, and that when the full effect on the respiratory center is produced, remedies are of little, if any avail; albeit, when the poison has entered in small quantities, treatment may be of service on general principles."

The vast research in the field for micro-organisms as causative elements of disease and the discoveries made therein, have given a new impetus to antiseptic treatment in every branch and affection. Antiseptic inhalations for pulmonary disease have proved of value, whether the germ theory be sustained or not. Carbolic acid and creosote are serviceable in typhoid fever, and other antiseptic agents are daily employed with equally good success. If their favorable action prove antiparasitic or otherwise, cannot at this time be ascertained, but in view of the results further investigations are indicated. Amongst the new antiseptics, naphthaline and naphthol have been mentioned as of great service; in regard to the latter, I have ascertained that if pure and properly prepared, it seems devoid of the toxic effects claimed for it.

A new feature of the greatest importance, which was first agitated by the British Medical Association, and brought before us at our last meeting, is that of collective investigation of disease. There is no denying the fact, that not alone have our statistics of disease, its ætiology, course, and termination, been very loosely collated and obtained from sources which altogether inadequately represent the condition of our country, as well as the domicils of the majority of its inhabitants, but that we have, as a consequence, no general idea as to the amount, the severity, and issue of disease, even if we take for granted that the reports of the various health officers are tolerably correct in regard to fatal results. The reports already received from our English brethren have demonstrated their value, and prompt us to a similar mode of investigation.

This system of collective investigation is also pursued in Germany, and it will, no doubt, ere long comprise all the countries which have an organized medical profession. The systematic collection of therapeutic results will alone be invaluable by showing statistically the worth of certain medicinal measures and their comparison in effects with others.

And now, in closing, I would remark that I have no new plans or propositions to offer for your consideration. The Section of Medicine continues to grow and attract more attention with each succeeding year. It is necessary for you, however, with this growth and development, to direct the attention of those entering the profession to the necessity of thoroughly mastering the details of all its different branches; above all that of general medicine, before entering into any specialty. There appears, just at this time, and it is for this reason that I refer to the subject, a desire on the part of a few physicians to gather in cliques, and, with shut doors against their fellow-practitioners, settle to their own satisfaction momentous questions in this or that special department which they affect. Such organizations are generally composed of a few medical authors and teachers and some of their friends, who think themselves immeasurably superior to the profession at large, and would create an aristocracy, as it were, in one of the most democratic of sciences and professions. Here lurks the danger to medicine as a science. When in centuries back the knowledge of special branches of medicine was kept a close secret, and transmitted as an heirloom in certain families, or hidden in the parchments of monastic libraries, the general practitioner was excluded from obtaining knowledge from these sources, and thus benefiting mankind generally, but was compelled to grope his way in darkness and trust to his own intellectual force. At that time it was thought impossible for the ordinary physician to handle the obstetrical forceps or cure favus—yet to-day both are a common practice. To that undesirable point shall we drift again if we will admit of this exclusiveness. The ten-

dency of these cliques is to keep intact their sacred circle for the use of themselves and their friends, not to study and teach by their assemblies, but to force the general practitioner to call to his aid these special oracles in every possible case.

Medicine, to be beneficial to humanity, must be open to one and all, and if its practitioners are to be excluded from medical societies and their meetings—not from a lack of knowledge and good standing—such societies have outlived their usefulness. Special studies may be made by physicians in certain directions, but the advantages of their research and study must be verified by their practical demonstration through the general practitioner. Without a thorough knowledge specialism avails little. This powerful organization should represent every branch and speciality of medicine, and its knowledge should be open to all its members. We are all entitled to the benefits derived from associated investigations. Outside organizations on special subjects will detract from the interest and advantages of our meetings, and the younger members, neglecting the general subject of medicine, dazzled by the apparent brilliancy of a select few, will wander forth to ultimately destroy their own usefulness. The American Medical Association is the representative body of the medical profession of this country, and has been organized and conducted by gentlemen who have grown gray in its service, and whose brows are adorned with chaplets most worthily won, not only at home but abroad. It is for them, and for you, my fellow-members, to control the means of disseminating our science, and not for a few, who, at best, only form but a spoke in the wheel of the triumphant chariot of our science. Our young men should learn from you that knowledge must come to them by the coöperation of their professional brethren from all parts of our country rather than from a few, who, in their exclusiveness, set themselves above the active members of the greatest and most humanitarian of all professions.

MEDICAL PROGRESS.

ANATOMY AND PHYSIOLOGY.

ANATOMICAL INJECTION OF THE BLOOD-VESSELS THROUGH THE CEREBRO-SPINAL CAVITY.—Dr. B. W. Richardson, in his *Asclepiad*, gives the curious results of some experiments made by him several years ago. He was trying to stimulate the brain directly with oxygen gas, and used for the purpose a long subcutaneous injection needle introduced into the cavity of the cranium from behind the eye ball, through the optic foramen. In his operations on animals, on opening the abdomen to expose the iliac veins and inferior cava, they were found to be filled with dark blood, then, on using his injection, almost instantly the blood in the vena cava inferior became of bright red arterial color, the color gradually extending along the vessel, until, in time, it reached the right side of the heart. This effect was produced by the use of oxygen, of common air, and of carbonic oxyde. The venous blood in the senuses of the brain and in the vena cava superior was not changed in color by the injection. Next, after dividing the vena cava and inserting a tube, coal-gas was injected in the same way, and escaped so freely from the vena cava jet that it could be lighted immediately. A drachm of mercury was made to pass in the same way into the iliac veins and lower part of the vena cava, this was repeated until the mercury reached the heart, traversed the lungs through the pulmonary circuit, reached the left side of the heart and extended into the arteries. In the process of embalming, four pints of the preserving fluid can be injected over the body through the subcutaneous injecting needle, by the cerebro-spinal cavity.

Dr. Richardson has been unable to discover, up to this time, how, from the cerebro-spinal cavity, the injected matter enter the veins so easily. It charges the plexuses of the medulli-spinal veins which lie between the pia mater and the arachnoid, but the entrance of it is obscure. No injury is traceable in the brain substance after the injection, unless undue force is used, but it is obvious that the lateral ventricles are first charged with the injection.

This leads to the almost certain influence that the cerebro-spinal fluid, which is always being secreted, finds its return current into the venous circulation in a similar manner, and that the cord and brain are thus relieved of pressure from it. If that be so, we have a ready and rational explanation of many cerebral and spinal disturbances occurring under retarded current of blood through the vena cava inferior by pressure in the vessel, or by obstruction in it in some part of its course. He gives as a case in point that of a gentleman advanced in life who was laboring under ascites. The abdomen was tense with the fluid, but the urgent and apparently fatal symptoms were cerebral and spinal. The patient was quite unconscious, breathed with deep stertor, and had frequent convulsive starts and tremors. Being in consultation, he suggested that the nervous symptom might be due to obstructed venous circulation and what might be called cerebro-spinal dropsy, and advised tapping, which was done with the result of drawing off eight pints of fluid, and restoring the patient to consciousness. He lived for nearly two years afterwards in comparative comfort, undergoing the operation of tapping several times, and sinking at last from gradual exhaustion increased by senile degeneration. Dr. Richardson thinks it probable that the vertigo which is met with in temporary hepatic obstruction, is often due to retardation of the return ascending venous current, and suppression of the cerebro-spinal secretion; as also hysterical convulsion, preceded by great distension of the abdomen from flatus, and that puerperal convulsion may be mechanically induced in the same manner, as the discharge of the cerebro-spinal fluid into the general circulation is seen to be, chiefly, at a part of the venous system where uterine pressure is most likely to prove an impediment to the ascending venous current.

EXPERIMENTS UPON THE RELATIVE RAPIDITY OF THE TRANSMISSION OF VISUAL, AUDITORY, AND TACTILE IMPRESSIONS.—M. A. M. Bloch reports to the *Jour. de l'Anat. et de la Physiol.* a series of interesting experiments upon this subject, which he sums up as follows:

1. The relative rapidity of sensorial transmissions cannot be studied by the method which consists in a voluntary response to an excitation of the senses; as it requires the coöperation of various parts of a physiological cycle, viz.: peripheric modification; nerve transmission; transformation of a sensation into perception; transformation of a perception into volition; motor transmission; muscle inertia; time lost by the instrument.

It establishes results upon an element that is unknown in its duration as well as in its essence; the transformation of a perception into volition; an individual element that is variable and modified by habit, and fundamentally is independent, as in touch, for example, of the duration of tactile transmissions, being in opposition to them.

2. The relative rapidity of transmissions of sight, sound, and touch, may be determined by noting the apparent simultaneousness of these sensations, and in studying the limits within which this simultaneousness manifests itself.

3. The interpretation of time space comprised between these limits depends upon the combined actions of the time of transmission and the duration of the persistence of the sensations.

4. Studying in each particular case the duration of the persistence of the sensations submitted to experiment, one may deduce the fraction of a second which measures the comparison sought for the comparison of sensorial transmissions.

5. Each of his experiments was composed of two parts independent of each other, and the concordance of the two results established a mutual control between these parts.

6. The comparison of vision, audition and touch, two by two, constitutes three distinct experiments; the control of each result is then proved by five other concordant results which are absolutely independent.

7. This quintuple proof of each result is not only a guarantee for the numeric value of each, but also, and particularly, a guarantee for the soundness of the theory which governs the experiments.

8. He proposes to designate under the name of *Limit of Appreciation* the sensorial error which cannot be avoided either in comparing two sensations of the same order, or in comparing two different sensations in connection with the movement of physical excitation.

9. He proposes to reserve the name of *Personal Equation* to the error of appreciation, readily modified, which results from the cycle commencing by an excitation and finishing by a voluntary movement.

10. In his last analysis he reaches the following results: Of the three sensations studied, vision is the most rapid. Then comes audition, the transmission of which is $^1/_{72}$ of a second longer than transmission; and lastly touch of the hand where the transmission continues $^1/_{21}$ of a second longer than visual transmission.

MEDICINE.

MALARIA AND THE EUCALYPTUS IN ITALY.—Consul Welsh, of Florence, reports to our Department of State (United States Consular Reports) a consideration of this subject, accompanied by a map showing the infected districts of Italy, which unfortunately is not published with the report. The map shows that Florence is not considered malarial, but its death-rate is considerable, while the deaths from typhoid fever, which term must be accepted with a very general signification, amount only to 166, the deaths from diseases of the respiratory organs and consumption amount to 1,480, or more than 25 per cent. of the total registered for the year 1882. The changes of temperature in Florence are so sudden and great, and the air so impregnated with the snow, which during the winter lies on the hills surrounding the city, that the effect on the lungs and general health of a constitutionally delicate person is most disastrous.

During the summer the days are hot and glaring, while the nights are very cool, a change of 25° F. not being unusual. During the winter piercing cold winds from the northwest, or warm winds from the south (sirocco), accompanied by rain, prevail. For consumptive patients, he recommends Pozzuoli, near Naples, the sulphuretted air of which is most beneficial, or Amalpi, on the Bay of Salerno. Both are protected from the north winds and enjoy almost uninterrupted sunshine.

Of the sixty-nine provinces into which Italy is divided, only six are considered completely free from malaria; the rest are more or less affected. Of the men composing the army, more than 10 per cent. suffer from fever during the year, and submit the State to an annual expense of about $200,000. The remedy which has been commenced is the planting and nursing of trees. The eucalyptus has been adopted as most effective. At Ventimeglia, which place was impregnated with fever in 1875, there were planted about 800 globulus eucalyptus, and in two years' time malarial fever disappeared. Great success has also attended the planting of the eucalyptus along the lines of railway and at the stations. An important nursery has been established by the Romane Railway Company, at Nola, near Caserta, and there are also many nurseries of the eualyptus due to private enterprise. Government committees having satisfied themselves that by the gradual development of groves of the eucalyptus tree, malarial fever may be, if not exterminated, to a great degree lessened, it is proposed to offer a reward, authorized by a law now before the national Parliament; for the production of the eucalyptus, which reward rates for each plant having a circumference at one meter from the ground of from 80 to 85 centimeters, 1 lire; to from 131 to 135 centimeters, 2 lire. For every centimeter over 1.35 meters, the reward will be 5 centimes.

ON GENITAL DIABETIDES.—The subject of diabetes has been especially engaging the attention of our French brethren for some time past, and their periodical literature contains much that is interesting on the subject. Prof. Fournier (*Jour. de Med. et de Chir.*), in his clinic at the Hopital Saint Louis, discusses the effect produced upon the genitals by what he calls diabetides. Diabetes acts in two ways; by the general alteration of the system, and by a local influence through the direct action of saccharine urine upon the integument. The sugar by its fermentation produces a sharp irritation of the skin, and, moreover, it favors the production of cryptogamic vegetation, which is of much importance. Among diabetics there are to be found at different points on the genital organs fatty crusts containing cryptogamic elements, which, according to Friedreich, give under the microscope the pathognomonic appearance of diabetes, and which resemble somewhat the parasite of muguet.

The various dermatoses of diabetes rarely appear suddenly; they are generally preceded by an intense pruritus, which may be of extraordinary violence, and cause perfect torture. It is particularly in women that this is most severe, being seated on the vulva, perinæum, and anus, causing loss of sleep and of appetite. It is seen from this that these symptons may occur without any cutaneous lesion on the one hand, and without any other of the marked symptoms which accompany diabetes. It should then be an invariable rule, that whenever an intense pruritus of the genitals occurs, without any lesions, the possibility of the existence of diabetes must be taken into consideration.

The first symptom observed in the woman, after pruritus, is vulvar erythema, the characteristics of which are in no way special, but which is only the first stage or the most common form—viz.: eczema. The eczema may be acute or chronic. The acute form is characterized by a marked redness extending over the vulva and perivulvar parts, producing a general turgescence, a serous weeping, local pain, intense itching, with smarting. It resists all treatment, improves a little, but is rarely cured; it has a great tendency to relapses. These variations are frequently due to the variable quantity of sugar in the urine; but after the lapse of a certain time the acute merges into the chronic form.

The chronic eczema does not occupy exactly the same seat with the acute, it generally extends further —to the groins, the abdomen, and the perinæum; its redness is darker, and is not effaced by pressure of the finger. The itching is at its height—repeated scratchings have produced a general hyperplasia of all the tissues, a true pachydermic condition, the labia majora and minora, and the different parts comprising the vulva are hypertrophied, and there is an active inflammation of all the anterior half of the vagina. Also on the mucous portions there are sebaceous crusts containing cryptogamic vegetations. So constituted, this form of chronic eczema is to a certain extent special in its character. It persists indefinitely, and is only modified in its extent. It is always susceptible to treatment, which must be prolonged and general relative to the diabetes itself, as well as local.

In man similar symptoms may result from diabetes, but they are more complex in their character. These diabetides occur on the gland under three principal forms, which have a close connection: erythematous balanitis, herpetiform balanitis, and eczematous balanitis. The first is characterized simply by erythema, with a little swelling of the meatus, limited at first, but soon extending to neighboring parts. In the second form the gland is more or less hyperdæmic, and showing little disseminated epithelial expoliations, round or oval, and resembling herpes closely. In the third form there is a true eczema of the gland, the surface of which has become epidermoid, desquamating, creased, and cracked at certain points, and the seat of a violent pruritus.

The prepuce is very often affected, particularly when it is long. In the diabetic eczematous posthitis, there is to be seen at the inferior ring a series of fissures in the shape of a crown, due to the movements of the prepuce necessary to uncover the gland. The posthitis is generally associated with balanitis, and one may say that this combination with its puffy condition, its cracks and its crown of fissures, is characteristic of diabetes. Eczema so localized is only found in this disease.

This form of balano-posthitis also often tends to the production of phimosis from the thickening and diminution of elasticity of the prepuce, as well as from the progressive narrowing and atresia of its inferior ring. Phimosis may in turn cause balano-posthitis. Then follows difficulty in urination, a more or less abundant and persistent serous discharge which is so irritating as to lead the patient to fear venereal disease, and finally a violent pruritus. In these conditions, phimosis is a marked and distinguishing sign of diabetes, and it has certain characteristics which merit attention: it is a subacute phimosis, very different from blenorrhagia; the prepuce is thick like parchment, non-elastic, immobile, without possible displacement, with sclerous atresia of the orifice, and finally, in its evolution it is chronically progressive, often taking many months or years to establish itself.

This phimosis, moreover, frequently undergoes certain complications. The infiltration may be excessively hard, and of a knotty form, giving rise to fears for a cancerous alteration, and it may produce vegetations remarkable for their rapid increase, repullulation, and the size which they may attain. The local treatment has one special indication, that of keeping the gland free from contact with the urine. When it is found to be incurable by the use of the ordinary treatment for such affections, the question of circumcision arises, but on account of the extreme risk incurred in all surgical operations upon diabetes, this should not be attempted until all traces of sugar have disappeared from the urine. There have, it is true, been successful cases, but the cases in which phymous, erysipelas and gangrenes have supervened are too numerous to warrant its attempt.

The genital organs may also in this disease be the seat of gangrenous lesions, but they are very rare.

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THE EDITOR of this JOURNAL would be glad to receive any items of general interest in regard to local events, or matters that it is desirable to call to the attention of the profession. Letters written for publication or containing items of information, should be accompanied by the writer's full name and address, although not necessarily to be published. All communications in regard to editorial work should be addressed to the Editor.

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SATURDAY, MAY 10, 1884.

AMERICAN SURGICAL ASSOCIATION.—This Association closed its regular annual meeting in the city of Washington, on Saturday, May 3, 1884. Its meetings, during the four days it was in session, were held in the hall or lecture-room of the National Museum Building of the Smithsonian Institute. About fifty members were present, and took a more or less active part in the proceedings. The number of papers presented was large, and, as usual on all such occasions, some of them possessed a high order of merit, while others were indifferent, or of little real value.

The two leading papers read during the last day of the session were on "Trephining for Epilepsy," by Dr. W. T. Briggs, of Nashville; and on "Extirpation of the Tongue in Cancerous Affections," by Dr. Basil Norris, of Washington. This latter paper represented the number of cases on record of extirpation of the entire tongue as 126, the results of which were given in 124 cases, claiming ninety-five recoveries and twenty-nine deaths. If this proportion of recoveries refers only to the number who recovered from the direct effects of the operation, it is probably correct. But so large a proportion of *permanent* recoveries would show that "cancerous affections" of the tongue are far less liable to reproduction, than the same class of affections in any other part of the body. The following officers were elected for the ensuing year: President—Dr. Wm. T. Briggs, of Nashville, Tenn.; Vice-Presidents—Dr. J. C. Hutchison, of Brooklyn, N. Y., and Dr. E. H. Gregory, of St. Louis, Mo.; Secretary—Dr. J. R. Weist, of Richmond, Ind.; Treasurer—Dr. John H. Brinton, of Philadelphia, Pa.; Recorder—J. Ewing Mears, of Philadelphia, Pa.; Council—Drs. H. F. Campbell, of Augusta, Ga.; Hunter McGuire, of Richmond, Va.; P. S. Connor, of Cincinnati, O.; and J. S. Billings, of Washington, D. C. Washington was selected as the place for the next annual meeting, and Dr. J. S. Billings as chairman of the local Committee of Arrangements. We regret to learn that Dr. S. D. Gross, to whom this Association is largely indebted for its first organization, was too unwell to be present.

During the meetings the Association decided to omit the annual dinner for this year. Nevertheless, some twenty of the members, including the retiring President, Dr. E. M. Moore, of Rochester, N. Y., enjoyed a banquet at Wormsley's Hotel, on Friday evening, under the superintendence of J. Ewing Mears, of Philadelphia, and L. McLane Tiffany, of Baltimore. Besides the eatables, there were the usual number of toasts and speeches, making the occasion altogether a pleasant and enjoyable one.

AMERICAN CLIMATOLOGICAL ASSOCIATION.—The members of this new organization assembled for their first annual meeting in the hall on the northwest corner Sixth and F streets, Washington, on Saturday, May 3, at 10 o'clock A. M. Though not a member of the Association, we went to the hall at the proper time, expecting to hear some good papers and discussions on topics of the highest interest. In this we were disappointed, however, as only fourteen of the forty members enrolled upon the list had made their appearance, and there being no audience but myself and a friend who accompanied me, the members present decided to devote their time to the consideration of the report of a committee on constitution and by-laws, and such matters as related to the completion of their organization, and postponed the reading of the papers until Monday morning, when it was hoped that a larger number would be present. Among those present whom I recognized as personal acquaintances were Dr. Charles Denison, of Denver; Dr. Frank Donaldson, of Baltimore; and Dr. A. Y. P. Garnett, of Washington. The first-named has a long and interesting paper on "Dryness and Elevation the Most Important Elements in the Climatic Treatment of Phthisis."

It is illustrated by maps and charts, and is based largely upon his personal observations during many years of residence and practice in Colorado. The second is to read a paper on "The Climate of Large Cities Dangerous to Consumptives," a subject of

scarcely less importance than the other, and yet one which has received less patient and accurate investigation than it deserves.

The observations made under the direction of the standing committee of the American Medical Association on the meteorological conditions of the atmosphere and their relations to the prevalence of disease, have shown that in the more densely populated parts of our large cities, hardly a trace of ozone or other active oxydizing agent is to be detected at any part of the year, while both free and albuminoid ammonia, resulting from the decomposition of organic matter, are seldom absent in the same localities. How far these conditions may favor the more frequent development and more rapid progress of phthisis in large cities, can be determined only by observations so numerous and protracted, that real causes and effects can be separated from mere coincidences. While looking at the limited number present in the meeting of the Climatological Association, I could not help thinking that all the objects of the organization could be just as well attained, at less expense, and with much better security for an audience, in connection with one of the Sections of the American Medical Association, than in a separate capacity. The special field the members propose to cultivate, namely, the relations between pulmonary diseases and climatic influences, might be prosecuted with perfect propriety in the Section on the Practice of Medicine and Therapeutics, where a good audience is reasonably certain, and from which the papers would speedily pass into the journal of the Association, and be widely distributed to the profession in all parts of the country, instead of being incorporated into a volume of Transactions to be read by very few outside of their own membership.

The same remarks apply to the Surgical Association and the Section on Surgery and Anatomy of the American Medical Association. If there should not be time to receive and consider all the papers in these Sections, it would be much more economical, both in time and money, to permit such Sections as were overcrowded to remain in session one, two, or three days after the time allotted to the general sessions of the Association, than to maintain a separate organization for each special field of professional work.

Just as we go to press the news comes of the death of Dr. D. D. Gross, the eminent surgeon and former president of the Association. His death occurred May 6, 1884.

SOCIETY PROCEEDINGS.

CHICAGO MEDICAL SOCIETY.

At the meeting of the Chicago Medical Society, held April 21, 1884, the following paper "On the Causes of Laceration of the Perinæum during Parturition, and its Prevention," was read by Philip Adolphus, M.D., Chicago:

The perinæum receives perhaps a rent in one labor, by the passage of a large head or ossified fontanelle; or possibly by a child with large shoulders. This is not sutured, and may not heal completely. In a succeeding labor, a face, or an occipito-iliac presentation, or some other unusual position of the head, renews the laceration and leaves a larger outlet.

A very *rapid delivery* through an infiltrated vulva may be *necessitated* by convulsions. Asphyxia in the child—the result of many conditions—*may require* that the shoulders, after the head is born, be *rapidly* removed whilst they are offering their *largest diameter* to the *smallest diameter* of the inferior strait.

Although the more frequent application of the forceps has made physicians expert in their use; yet laceration of the soft parts *do occur*, in the practice of young physicians, when in their *earlier cases* they use the forceps.

In difficult head and face labors also, where the forceps is used by the skillful practitioner, the perinæum may be lacerated.

Now, lacerations of the perinæum rarely heal throughout their whole extent *spontaneously*, although when carefully sutured the integrity of the perinæum is restored. In later births the scar generally stretches and yields as well as the normal tissue.

The *result*, then, of previous labors *is*, that the vast majority of all multiparæ who suffer with chronic pelvic disease, have lost one-third or two-thirds of the thickness of the perinæum, and some have merely a very thin partition between the vagina and rectum. Not a few show cicatrices of far more extensive lacerations, implicating even the anus, which have healed without operation. Very few women come now-a-days under the notice of the gynæcologist with lacerations implicating the rectum, whilst the rarest of all met with are those central lacerations of the perinæum, through which the fœtus has passed; for these lesions above all others, heal easiest.

The *frequency* of lacerations of the perinæum in general, is 15 per cent., of which 35 per cent. occur in primiparæ, and 53 per cent. in primiparæ over 30 years of age.

The *causes* of laceration are due to the *structure* of the pelvis, the *condition* of the soft parts of the mother, to *the fœtus*, or the *character* of the labor.

Primiparæ generally have the fourchette lacerated in the first labor.

Excess of energy in the *contractions* of the uterus, may be developed by a *narrow pelvis;* the head, after a tedious labor, being forced rapidly through the perinæum, by an irritable and violently excited

uterus; the patient thereby being exposed to the dangers of precipitate and tedious labors.

Any deformity of the bony pelvis, as, where the sacrum is too straight, or too near the pubis; where the coccyx is anchylosed, or where the rami of the pubes and ischia approximate too closely, may cause the head to advance too straight, or may force it too far backwards. In all such instances the proper extension of the head cannot occur, and it is pressed too powerfully against the floor of the pelvis, causing laceration.

In some primiparæ, whether thin or plethoric, especially in those who have married early or late in life, we meet a peculiar nervous or vascular excitement which disposes to rigidity of the soft parts during labor.

In these cases of "vital rigidity," and others where the elasticity of the mother's tissues are at fault, the arrest of the fœtal head at the floor of the pelvis causes the uterus to contract violently, inducing great pressure in the perinæum. The soft parts gradually yielding, the child is born; more frequently, if skilled assistance is wanting, the perinæum lacerates more or less extensively.

Now-a-days physicians and midwives are taught to interfere earlier in irritable and rigid conditions of the soft parts, before lacerations are likely to occur. The greater danger of losing the life of the child in first labors, is a sufficient reason for expediting delivery in cases of tedious labor.

The narrowness of the perinæum may not permit the head to turn well forward, and cause it to rupture, *or* firm cicatricial thickening, or syphilitic or malignant deposits may weaken it; *and* deformities of the os vaginæ and vulva from the same cause, or *any other* physical obstruction, may induce laceration.

Swelling of the vulva, from infiltration of serum, in cases of albuminuria and threatened convulsions, may induce laceration and sloughing if small incisions are withheld. These incisions into the skin and mucous membranes drain off the serum, and overcome the obstacle to labor.

Ordinary-sized heads presenting normally in these conditions of the perinæum, may induce lacerations; nay, even small heads may do so, because they pass too rapidly. The narrower the genital fissure, and the larger the head, and the more rapid its passage, the more easily the perinæum ruptures. Large heads—mostly found in boys, who are generally heavier than girls, and who have consequently large and firm skulls—increase the difficulties of any labor, especially in primiparæ, owing to the greater tonicity of the parts. But these are found mostly in multiparæ, for, according to Schrœder, "the bi-parietal diameter of the head increases quite out of proportion to the number of labors, and the age of the mother."

Large women run more danger of laceration of the perinæum, because they are generally delivered of larger children, for the weight of the child increases with the weight and age of the mother. Therefore, a multipara of stout frame and mature age will have the greatest strain on the perinæum; but even here the soft parts will have been dilated by previous labors.

The most favorable presentations for the perinæum are those of the breech. In head presentations the normal is the best. The occipito-iliac and the face presentations are the least favorable. Any other parts of the body presenting with the face increase the danger. The shoulders occasionally are too large. They are then retained at the entrance of the pelvis, and obstruct the passage of the head. The forceps will assist its passage; but the shoulders again hinder the passage of the trunk after they have gotten to the bottom of the pelvic cavity, and then rupture of the perinæum takes place.

The rapidity of the labor is important. In rapid labors, where the uterus and the accessory muscles act too violently, the head may not only tear the perinæum, but also the vagina and cervix. In these cases the shoulders may be pushed simultaneously through the lacerated floor of the pelvis. More frequently the physician causes the laceration when the labor requires a speedy termination in the interest of mother or child, or of both. For instance: after a difficult forceps labor, in cases of convulsions, in prolapse of the cord, or in cases where the cord is around the neck of the child, in tedious labors, or after profound losses of blood. The child, after the head is born, either by the efforts of nature or assisted by the forceps, is often in a state of asphyxia. It does not breathe or cry; its face is congested. Every moment is precious. The physician must deliver the trunk in order to resuscitate it.

The exhausted uterus rests awhile; the equally exhausted woman, although relieved of intense agony, cannot be induced to make bearing-down efforts; or she is still under the influence of an anæsthetic. The head and face are completely disengaged; the soft parts embrace the neck.

The child's head is placed antero-posteriorly. Rotation of the shoulders and the consequent external rotation of the head has not taken place; they are therefore at right angles with the head, in the transverse diameter of the outlet, which is the smallest diameter of the inferior tract.

Anxious to deliver, the physician gropes for the axilla, inserts his finger into it, pulls down one shoulder, then the other, delivers the body of the child, and resuscitates it. By-and-by he finds an extensive laceration of the perinæum, which might have been prevented had he tried to rotate the shoulders from the transverse into an antero-posterior position during extraction.

In his anxiety to save the child, he forgot that the head and neck of the fœtus are at right angles; that when the head disengages from before backwards at the vulva, the shoulders are situated transversely at the inferior strait, which renders it necessary that the head and body should perform necessarily the same mechanical movements of rotation and disengagements. Furthermore, the external rotation of the child, the so-called movement of restitution, is caused solely by the rotation of the shoulders.

What must be done to prevent laceration of the perinæum? Our principal means of prevention is to regulate the rapidity of the passage of the head and body of the child.

During the latter stages of labor we should endeavor to have the patient completely under control, by removing irritability and obtunding sensibility. Even the severest pains should not be agonizing, but rather stimulating. Violent bearing-down pains by stemming the feet against the foot of the bed, or pulling on sheets, should be discouraged.

The pressure of the patient's hands against those of the nurse is sufficient. Whenever the uterus contracts forcibly and the presenting part presses against the perinæum, the patient should be forbidden to bear down and instructed to open her mouth. If the patient cannot forbear doing so, an anæsthetic must be used.

The manual management of the perinæum rests on this principle, namely: to superintend the disengagement and expulsion of the presenting part, with safety to the soft parts of the mother. It is therefore expedient sometimes to assist as well as to retard the advancing part; whether it be of the vertex by extension, or the face by flexion. This principle guides the practice of all physicians, however much the minutiæ might differ. The following method has served me well:

Let the patient lie on her back, when the perinæum is distended by the head. The physician's right hand is applied to the perinæum, with the thumb near the vulva, and the four fingers pointing towards the rectum. Thus the palm of the hand covers the head from the nuchæ to the frontal bones. If the pains are too violent, he presses the occiput of the child in the direction of the coccyx, by introducing his thumb into the vulva, whilst at the same time the palm of the hand lifts the perinæum and head in the same direction.

If it is desirable to assist the extension of the head, he inserts the second and index fingers into the rectum if necessary, and presses the frontal bones towards the symphysis, whilst the palm of the fingers and hand elevate the perinæum in the same direction.

If the pains require neither expediting nor restraining, the physician has his hand in readiness to do whatever is necessary, without the slightest pressure being made on the perinæum.

The introduction of the index and second fingers into the rectum enables us to advance the head materially. By it the relations of the child's head to the perinæum can be well appreciated.

If rupture of the perinæum is imminent, owing to the violence of the pains, authorities advise that the patient be placed on her left side, and lateral incisions be made. I prefer the dorsal position, the administration of ether, and the removal of the head by forceps.

I can conceive that it might become necessary where laceration is inevitable, to make lateral incisions into the perinæum; but the timely application of the forceps will render this procedure useless; for it will save at the same time the soft tissues of the mother and the life of the child.

In applications of the forceps, the *advice* of Elliot should be followed; of introducing two fingers *deep into* the rectum, for this manœuver will impart *exact information* of the *relations* of the head and soft parts, *to the forceps*.

In narrow pelves, either the forceps or turning is indicated, *long before* the uterus would be lashed into such an excess of energy as would force the head through the perinæum.

In fact, in *all cases of first labors*, the forceps is indicated for the safety of the child, *before* the perinæum is threatened.

For the treatment of rigidity, opiates and chloral are *advisable*; they *remove* irritation and *promote* dilatation, and often render the exhibition of anæsthetics *unnecessary*. Morphia by the mouth has been given by me for years, and *by it* a timid woman can be carried through a tedious labor, *without* losing courage or suffering intensely. It obtunds the agony of the *latter stage of labor*, promotes sleep *without* abolishing consciousness, even during the short intervals of the last pains, for the renewed contractions will immediately awaken the patient.

DISCUSSION.

Dr. D. T. Nelson thought dilatation and relaxation of the perinæum usually begins long before the head of the child presses upon it. But if this process is tardy, then it may be necessary to apply emollients or fluids, to facilitate the relaxation, also give chloroform to hasten this and the labor. To expedite a labor, the perinæum should dilate, but if this is soft and succulent, then we do not resort to emollients, or perhaps the perinæum may be aided in dilating, by the accoucheur using the back of the thumb and finger.

Another observation: Corpulent women are more likely to suffer from laceration. Is it because adipose tissue tears more easily? This being true, how can this be prevented in an exceedingly corpulent patient? We should aid nature in trying to make the process of labor as nearly normal in every respect as possible.

Dr. J. H. Etheridge asked incidentally the members of the Society, if they had ever noticed the skin over the perinæum ruptured, where the rupture did not include the body of it? He then recited a case, a primipara, forceps delivery, where the skin only was ruptured nearly the entire length, from the fourchette to the rectum.

Dr. Jaggard thought there was but little more that could be added to that which the writer had stated and explained in his paper. Regarding the technique —"to support the perinæum"—this is a misnomer. Protection covers the ground more fully, and is a better term.

In Australia, some portions of France, and the United Kingdom, a patient is confined on her left side. In Germany the woman is placed on all fours, so to speak, as they reason there the child's head, then, will be in a state of flexion. The perinæum is a distensible body, and admits of the two-fold action, flexion, and substitution of the child's head. No amount of protection will preserve a perinæum from rupturing if there is malformation or infiltration of unhealthy tissue, as serous tissue or quantities of adipose in the perinæum. As one of the speakers alludes

to ephisiotomy (Hecker) says, if performed, *i.e.*, the conjoined method, may preserve it. Under the supervision of Karl Brown, of the Vienna hospital for lying-in women, during the speaker's experience the first two years with his first fifty cases, one-half of them resulted in laceration of the perinæum, but later only two cases ruptured in 100.

Dr. T. P. Seely frequently gives chloroform to quiet the nervous tendency a patient may have, and to ease her pain. This, he believes, will tend to very much lessen the danger of laceration of the perinæum.

In his practice he permits the patient to inhale it from the bottle, and does not sprinkle it on a handkerchief. By his method much less of it is used, and in this manner it can be done with much satisfaction.

Dr. J. S. Knox, not having heard all of the paper read, would only state that, in his practice of late years, to save the perinæum, where the uterine forces are exhausted and the passages dry, he uses small light forceps with a double curve. We should have complete anæsthesia of the patient. We can then extract the head easily, and by these means save the perinaeum.

Dr. C. T. Fenn. Regarding the position of a woman, the dorsal decubitus, it seems to him, is, *par excellence*, superior to all others, and then, to obtain the best results in preserving the perinæum, we should support this body with the left hand, then with the right hand placed over the patient's abdomen, and with moral influence in soothing her, he thought had much to do towards a favorable result; also to calm her by gentle measures, has much to do where there is present rigid muscular action, which is removed, and a state of relaxation will ensue. Fluids do not promote the expansibility of the perinæum, nor do ointments on the integument have much effect in this direction.

Dr. Jaggard stated further, that in Philadelphia, Boston, and New York, the left lateral position is most emphatically employed.

Dr. Adolphus concluded by saying, every physician uses emollients to soften and relax the rigidity that may be present in perinæi. He uses two fingers to keep the parts separated, and we must not permit the parts to become dry. The child, though, is primarily to be saved; the perinæum secondarily. Regarding external ruptures, he thinks they occur, but we may not notice them at the time they happen, but later, if we examine them, as in a few months, we then may notice a cicatrix. He thought Dr. Jaggard was mistaken in his statement that but two lacerations occurred in his last 100 cases that he alluded to, although he knew the doctor made the statement sincerely enough, but had he examined his patients six months after, there doubtless would have been cicatrices noticed.

BOOK REVIEWS.

INSANITY—ITS CLASSIFICATION, DIAGNOSIS AND TREATMENT. A Manual for Students and Practitioners of Medicine. By E. C. SPITZKA, M.D., Professor, etc., etc., etc. New York: Bermingham & Co. 1883.

This work, according to its preface, has been enlarged from an "essay to the dimensions of a general treatise, at the requests and suggestions of pupils and professional friends," in order to "lay special stress upon points which will prove comparatively new to most American readers," and because the author "has felt that there exists a need for a treatise, which, without being so exhaustive as to tire and bewilder the beginner and the general medical reader, shall direct attention to some of the salient points of psychiatry, etc., etc." The work appears, moreover, to be the precurser of a "larger one on insanity which the writer has in preparation, and which will appear in a few years." The work is divided into three parts, of which the first has for its subject "the general characters and the classification of insanity; the second, the special forms of insanity, and the third, insanity in its practical relations.

In the initial chapter the author, following the stereotyped programme, attempts the impossible feat of framing a verbal definition, which shall include all that is, and exclude all that is not, insanity; and with the usual result. He has, however, succeeded in framing a "definition" which, for length, circumlocution, involution and vagueness stands unrivalled. It moreover includes conditions in which every thoughtful man frequently finds himself without a suspicion concerning his sanity. In the second chapter the delusions of the insane are referred to as "perversions of the conceptional spleen," which "have had the high medico-legal position assigned to them—it is scarcely necessary to add, *erroneously*—of constituting the criteria of insanity," etc., and are subsequently designated as "*faulty ideas growing out of a perversion or weakening of the logical apparatus*, whatever that may be. Later, delusions are subdivided into "*genuine* and *spurious*," of which "the former group consists of those delusions which have been mainly created by the patient himself." The author exemplifies delusion thus: "If, for example, a medical student, as in a reported case, believes that he is suffering from spinal disease, and bases this delusion on alleged symptoms which might justify the belief, if they were not due to illusional misinterpretations and hallucinatory visions of the spinal cord,[1] he is suffering from a *systematized hypochondrical delusion*."

Still later, "the following legal definition of an insane delusion, that it is *a faulty belief, out of which the subject cannot be reasoned by adequate methods for the time being*, is (said to be) a sound one." To what, it may be asked, are these methods *adequate*, since they fail to accomplish their object? This "legal definition" must include all those holding

[1] The definition of this enigma is left to the sagacity of the students and practitioners who may perchance become readers.

religious beliefs (for example), faulty in the estimation of those who oppose them, and out of which they cannot be reasoned by methods adequate in the judgment of the reasoner, but inadequate in that of his subject.

In a subsequent chapter hallucination is defined as "the perception of an object as a real presence, without a real presence to justify the perception." It would be interesting to some, at least, of the "students and practitioners for whose enlightenment this book is written, if the writer had given the distinctive definitions of object and real presence, and had also explained how an object of perception could be other than a real presence.

On the subject of moral insanity the author's expressions are vague and inconclusive, and in relation to the "will in insanity," after advancing the proposition that "there is probably not a single case of insanity in which the will, in the widest sense, is not at some time or other in the course of the illness, more or less disturbed," he proceeds to prove that the will is supreme in its domination over actions instigated by disordered perceptive faculties.

The chapter on "the physical indications of acquired insanity," is marked by ambiguity and inconsistency, which pervades the entire work.

The chapter on "the morbid anatomy of insanity," comprising the writer's observation in this field of investigation, contains matter both interesting and valuable, although its merit is materially diminished by the discredit accorded to the work of others in the same field. Had the observations of the pathological anatomy of insanity, contained in this volume, been published as such, they would have constituted a valuable contribution to the science of psychiatry. But their utilization by means of shallow sophistries, as bases for false psychological theories, couched in ungrammatical jargon unintelligible to any but a polyglot, can serve only to confuse, mislead and discourage those whom it assumes to enlighten and instruct.

The past decade has been most prolific in neurological literature; observers have been industrious in the prosecution of investigations, and perhaps even more so in their publication. It would have been better for their own reputations and for the interests of science, had some of them, at least, been content with the former alone; it would have been better had they known that among many observers there are few thinkers, and very few teachers; that endowment with a reasonable degree of perspicacity for observation of objective phenomena, or even the additional possession of erudition adequate to record them intelligibly, by no means implies ability to estimate their significance, to compare them, nor to deduce logical conclusions from such comparison.

Few minds are trained to so great a degree of accuracy in the performance of secondary or mediate, as of primary or immediate perception, and this organic defect is the source of much, if not of most of the false theory based upon deduction from observed phenomena; hence the great advantage of the classification of intellectual labor—"*suum cuique*;" to some, the task of observation; to others, that of comparison.

FOREIGN CORRESPONDENCE.

LONDON, APRIL, 1884.

Before long, the stronger sex will have to meet the gentler on an equal footing in all the professions. The invasion of women, which is the chief event in recent university history, has advanced another step at Oxford, when congregation agreed by 100 votes against 46 to admit women to several university examinations. The girls will not yet, at least, be examined in the new schools with the undergraduates, but they will have the same papers and the same examiners, and their class lists will be drawn up on the same standard. The lady students at Cambridge have been for some time examined in this way. The opponents of the scheme, however, were divided amongst themselves; some of them arguing that as women were so notoriously inferior to men it would be unkind to subject them to the same examinations, whilst others thought that the change would be unfair to the men, because women were foreordained to be their "helpmates, and not their rivals." There were so many ladies present during the debate that many of the Dons could not gain admission.

The Marine Observatory at Granton, near Edinboro, the first of its kind in Great Britain, is now fairly launched, and will be in working order during the spring. Already many herring, cod, and other living fish are housed in cages for observation. There will be accommodation for six naturalists, and British and foreign observers with some definite object in view will be invited to use the station free. Now it is proposed to erect a marine biological observatory, on the same lines as the one at Naples, on our southern coasts, probably Torquay or Weymouth. A meeting to carry out this object is about to be held at the Royal Society. Professor Huxley will be in the chair.

Mr. William I. Nixon, house governor of the London Hospital, read a paper at the rooms of the Medical Society of London, dealing with the difficulties connected with the administration of the outdoor department of our London hospitals. The system has been in vogue for upwards of 140 years, and it is estimated that more than 1,000,000 persons, or one quarter of the population of London, were every year recipients of gratuitous medical aid. His remarks had little bearing upon the care of any but those hospitals which are supported by voluntary contributions. With a view of reducing the difficulty of too great numbers of out-patients without injuring the deserving poor, he thought it desirable that a system of inquiry should be organized. A few leading questions kindly put, not influenced by any set amount of earnings or income which the applicants might be receiving, would elicit the required information. There should be an inspection based on charitable concession. With regard to two methods which had been suggested, and in some cases adopted as remedies, Mr. Nixon considered neither just nor charitable, viz.: payments by out-patients and daily limitation of tickets to patients permitted to pass free. The first was totally unworthy of a great

charity whose existence was established, and whose lease of life was insured by its great value to the community. Charge for advice was unfair to the professional man who gave his services practically free to the institution. Charge for medicine placed the hospital in unworthy competition with the local practitioners, and, however small it might, be was a heavy tax upon the very poor.

A most entertaining volume called the "The Gold-Headed Cane," has just been published. It is edited by Dr. William Monk, F.S.A., Fellow and late Censor of the Royal College of Physicians. Most people who have visited the College of Physicians, have seen there the gold-headed cane which was carried successively by Dr. Radcliffe, Dr. Mead, Dr. Askew, Dr. Pilcairn, and Dr. Baillie, and on the head of the cane are engraved the arms of these famous men. By Dr. Baillie's widow the cane was presented to the college, and the day before the opening of the existing edifice in Pall Mall East, the cane was placed in a cupboard of the library, where it remained for more than half a century. Now it is seen in a glass case in the same apartment. In the delightful book edited by Dr. Monk, the cane is made to tell its own story. In the first five chapters, Dr. MacMichael, some time Registrar of the college, has been the cane's amanuensis. In the second period, the cane, withdrawn from intercourse from the outside world, but present where the weightiest medical matters are discussed, has its comments and meditations chronicled by Dr. Monk. The book is a sparkling epitome of the history of modern medicine. In it one reads of Dr. Radcliffe's medical attendance upon William III, about the Dutch surgeon Bidloo, about Prince Eugene, and Dr. Cheyne, and Sir Hans Sloane, and in fact, about most of the notable people of the eighteenth century. There is also some interesting talk about Dr. Conolly, the compeer of the illustrious Pinel, and who first showed in England the practicability and efficiency of the non-restraint system in lunacy.

Since the decision in the case of Dr. Price that cremation is not illegal in this country, it is proposed that a crematorium in full working order shall be exhibited at the forthcoming National Health Exhibition. The point of such an exhibition would be to familiarize people to the latest results of sanitary science. There is going to be a row of sanitary houses, and a row of unsanitary, facing each other, and it is a pity they cannot also exhibit alongside of the crematorium a section of a cemetery.

The Prince of Wales has just opened the Westminster School and Home for Nurses, an institution for the training of nurses to be employed at discretion, either in hospital nursing, district nursing in poor localities, or nursing in private families. The Prince of Wales mentioned the experience in his own family of how geatly skilful and tender nursing contributes to speedy and satisfactory recovery from illness. The committee hope shortly to have fifty nurses at their disposal, and the institution to be self-supporting. The great number of fatal and serious accidents that have happened during the past season in the foot-ball field, have given rise to a loud cry against the present rules in force in this game. At a late inquiry into the death of a student at the Royal Engineering College, a witness stated that the game was not more dangerous when played according to the Rugby rules than according to those of the Association. It is to be hoped that fresh regulations will be in force before the commencement of a fresh season.

Dr. Barnes is to be congratulated upon having at last prevailed upon the Council of the College of Surgeons to abolish their special license in midwifery and to make it part of their ordinary qualification. Previously, holding only the licentiateship of the College in Midwifery, was sufficient to qualify a person's name being placed on the "Medical Register."

G. O. M.

DOMESTIC CORRESPONDENCE.

FROM WASHINGTON.

Matters of Medical Interest before Congress. —April 21. Under instructions from the Committee on Printing, Representative Scales, of North Carolina, introduced a joint resolution into the House (which was passed) to the following effect:

Whenever the Public Printer shall have received a sufficient number of orders for copies of the reports * * * of the Medical and Surgical History of the Rebellion, * * * accompanied by the cost price thereof, with 10 per cent. additional to warrant, in his opinion, the expense of putting the plates to press, he shall cause an edition or editions thereof to be printed. Provided. That the number of copies thus at any time printed shall not exceed the number ordered and paid for in advance of publication.

April 21. Senator Call, of Florida, submitted a resolution to the Senate (which was agreed to), as follows:

Resolved, That the Committee on Public Printing be directed to report to the Senate the cost of reprinting * * * 10,000 copies of the Army Medical and Surgical History of the War, for the use of the Departments and public libraries, and the two Houses of Congress. Also to report what number, if any, of the volumes of these books are now in possession of the Government for distribution to public libraries.

April 22. The Senate Military Committee reported adversely on Senate Bill 1920, providing for the appointment of Dr. A. P. Frick as an assistant surgeon in the Army. The committee in its report gives the following letter from Surgeon-General Murray, which is heartily endorsed by the Secretary of War in his letter transmitting it to the Senate: "An endeavor to secure through Congressional legislation an appointment in the Medical Department of the Army, setting aside prescribed regulations, establishes a dangerous precedent, and one which is viewed by this office with marked disapproval. The statutes and regulations governing the admission of candidates to the Army Medical Department are the result of the

experience of years, and have been supplied by officers thoroughly conversant with the needs of the service, and have in view the perpetuation of thorough efficiency by the selection of young and vigorous men whose qualifications, both physical and professional, for the positions are rigidly scrutinized by a duly appointed examining board. No departure from the present system or relaxation, conceded to be wise and just, can but result in the demoralization of the department, and is greatly to be deprecated. The employment of doctors known as contract surgeons has heretofore been a matter of pure necessity to supplement the regular corps or to provide medical assistance for U.S. troops in emergencies, when the services of commissioned officers could not be had. As a rule they are not examined by a board as to their qualifications, but are taken upon recommendation, and the length of their service is dependent upon the emergency or circumstance which required their employment. The gradual concentration of army posts renders it now possible to dispense to a great degree with this class of doctors. In the case of Dr. Frick, there is no good reason why he should be preferred over many others who have done good and meritorious service as contract surgeons, and if the precedent is established in his case the result will be similar legislation in many other cases; by which the Medical Department will be filled by men who are rapidly passing the age of efficiency, and who in many cases are unfit for the position by lack of education and professional acquirements."

The Senate adopted the bill (S. 1559I; see page 272) to define the titles and duties of officers of the Medical Department of the U.S. Army.

April 25. Mr. Blair, from the Committee on Education and Labor, to whom was referred the bill (S. 1484; see page 272) to provide for the study of physiology, and the effect of intoxicating, narcotic, and poisonous substances upon life, health, and welfare, by the pupils in the public schools of the Territories and the District of Columbia, reported it to the Senate without amendment.

Memorials and petitions from citizens of Connecticut, South Carolina, New Jersey, and Louisville, Kentucky, have been presented in the Senate, protesting against the discriminations now made in the Army, Navy, and Civil Service appointments (excepting the Pension Office) between different schools of medicine.

THE TONER COLLECTION IN THE LIBRARY OF CONGRESS.—This collection, which was donated in 1882, and accepted by a special Act of Congress, May, 1882, from Dr. Joseph Meredith Toner, of this city, consisted of his own private library, embracing over 27,045 volumes of books, besides 12,000 pamphlets and periodicals, and contains much valuable material in the local history of States, counties, and towns, in biography, in medical science, in early imprints, etc. The last report of the Librarian of Congress, Jan. 30, 1884, shows that this donation is still being added to by Dr. Toner to a noteworthy extent; thus, in the past year he has added 470 volumes of books and 3,755 pamphlets, making the figures show 27,515 volumes and 15,755 pamphlets. Among the accessions is an extensive collection of authentic portraits of American physicians and surgeons, including many of early date, which have been fully indexed for ready reference. Mr. Spofford says further—"The frequent calls upon the Toner collection for information upon points of biography and history, as well as medical science, evince the utility of this addition to the stores of the Library of the Government."

EDITOR OF THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION:

In reading the valuable and interesting compilation of reports of cases of hydronephrosis, and tabulation of operations with results, by Dr. G. A. Staples, as published in the issues of April 12 and 19 of your journal, in the report of the interesting case, No. 49, I find two points upon which the report is inaccurate, and desire the privilege of correcting it. Upon page 422 he says: "The affection had been diagnosed by various physicians of St. Paul, St. Louis and Dubuque as tumor of the spleen, phantom tumor, etc. No therapy advised had been of service. Dr. Staples diagnosed hydronephrosis, but his opinion was not sustained by any other surgeon consulted." Lower on the same page he says: "It is proper to add that the increased flow of urine after a 'spell' had not been noticed until Dr. Staples called attention to the fact by his inquiries." As stated, during the twenty years of the existence of this trouble, a number of physicians had been consulted, of whom I was among the earlier ones. I first saw the case in 1867. At that time the attacks were less severe; rest in the recumbent position usually affording prompt relief. In the fall of 1869, the attacks having become more frequent and protracted, my attention was called to the case. After a careful investigation, I was led to believe the trouble involved the kidney. The correctness of this opinion was verified Dec. 11, 1869, when the patient, at my request (previously made) during an attack, allowed it to proceed until the tumor became perceptible, then emptying the bladder as completely as possible, she assumed a position upon her back on a firm surface, with her clothing loosened. She experienced a sense of relief, and upon rising again emptied the bladder in a fresh vessel, voiding a quantity of urine much greater than could have been normally secreted during the time involved. My diagnosis was, "obstruction of the ureter where it leaves the kidney."

I could find no history of hæmaturia or renal colic, yet the fact that assuming the position described above, with the shoulders as low, or lower, than the hips, had often afforded relief, led me to infer it might be due to a smooth calculus closing an enlarged ureter, which would be dislodged by the position described. Upon informing the patient of this diagnosis, I was asked if I could promise them a radical cure. My reply was, "that while I felt confident of being able to afford relief and probably ward off attacks, a radical cure would require an operation involving dangers that were not justified by the case at the time." Because of my unwillingness to assure

definite results, my connection with the case ceased, and it passed into the charge of a prominent homœopath, who, I was informed, diagnosed and treated it as a case of ovarian disease. Subsequently the case was under the care of Dr. N. M. Hill, who, in the spring of 1877, without knowing the details of my diagnosis, made one practically the same, and verified the fact that relief from pain was coincident with an increased flow of urine. Soon after making this diagnosis known, the doctor's services were dispensed with.

The above earlier history of the case having occurred before the writer entered upon the study of his profession, it is not surprising it should have been overlooked in the statement or notes he received from his father, Dr. Geo. M. Staples.

WM. WATSON, M.D.

Dubuque, Iowa, April 23, 1884.

MISCELLANEOUS.

CARPENTER, J. M., M.D., of New Lancaster, Kansas, was born Dec. 17, 1838, in Lockport, New York; died August 8, 1882, aged 44 years. He came to Kansas in 1857; served in the Army during the war of the Rebellion. He commenced the practice of medicine as an under-graduate in 1866, at New Lancaster, and was remarkably successful. He graduated at Miami Medical College, Cincinnati, Ohio, in the winter of 1871–'72; afterwards took post-graduate course at Rush Medical College, Chicago, Ill. He was an energetic worker in the State Society, and had attained an enviable reputation as a surgeon. He was a delegate from the State Society to the American Medical Association in 1878, and again in 1882, at Buffalo, N. Y. He died at New Lancaster, Kansas, universally lamented.

C. V. MOTTRAM.

NEW BOOKS.

Barnes, R. and F. A System of Obstetric Medicine and Surgery, Theoretical and Clinical, for the Student and the Practitioner. Vol. I, illustrated. 8vo. London: Smith & Co. 18s.

Edgelow, G. Hæmorrhoids and Prolapsus: their Immediate and Painless Cure. 5th edit. London: Eade & Co. 1s.

Heath, C. Injuries and Diseases of the Jaws. 3d edit. 8vo, 472 pp. London: Churchill. 14s.

Latham, P. W. On the Formation of Uric Acid in Animals: its Relation to Gout and Gravel. 8vo. London: Bell. 1s 6d.

OFFICIAL LIST OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT UNITED STATES ARMY, FROM APRIL 26, 1884, TO MAY 2, 1884.

(Par 2, S. O. 101, A. G. O., May 1, 1884)

Heger, Anthony, Major and Surgeon. From Department of Texas to Department of the East.

Happosett, J. C. G., Major and Surgeon. From Department of Texas to Department of the East.

Bentley, Edwin, Major and Surgeon. From Department of the East to Department of Texas.

Middleton, Passmore, Captain and Assistant-Surgeon. From Department of Texas to Department of Missouri.

Koerper, E. A., Captain and Assistant-Surgeon. From Department of the East to Department of Dakota.

Dickson, J. M., Captain and Assistant-Surgeon. From Department of the East to Department of California.

Girard, A. C., Captain and Assistant-Surgeon. From Department of Dakota to Department of Missouri.

Girard, J. B., Captain and Assistant-Surgeon. From Department of Arizona to Department of the East.

Hall, J. D., Captain and Assistant-Surgeon From Department of Dakota to Department of the Columbia.

Hall, Wm. R., Captain and Assistant-Surgeon. From Department of Missouri to Department of Texas.

Cunningham, T. A., Captain and Assistant-Surgeon. From Department of the East to Department of Missouri.

McCreery, Geo., 1st Lieut. and Assistant-Surgeon. From Department of Arizona to Department of Dakota.

Cochran, J. J., 1st Lieut. and Assistant-Surgeon. From Department of Missouri to Department of Arizona.

Shufeldt, Robert W., Captain and Assistant-Surgeon, relieved from temporary duty in Surgeon-General's office and ordered to report to Lieut.-Col Basil Norris, Surgeon U. S. Army, attending surgeon Washington, D. C., for temporary duty in his office. (Par. 6, S. O. 100, A.G O., April 30, 1884)

Barrows, C. C., 1st Lieutenant and Assistant-Surgeon, relieved from duty at Fort Grant, A. T., and ordered to report for duty at Whipple Barracks, A. T., relieving 1st Lieut. W. E. Hopkins, Assistant-Surgeon, who, upon being relieved, will report for duty as post-surgeon at Fort Grant, A. T. (Par. 1, S.O. 31, Hdqrs. Dept. of Arizona, April 21, 1884.)

Phillips, John L., 1st Lieutenant and Assistant-Surgeon (Fort Warren, Mass.), ordered to report for temporary duty to the commanding officer at Fort Preble, Me. (Par. 1, S.O. 81, Hdqrs. Dept. of the East, April 28, 1884.)

Cuyler John W., Colonel and Surgeon, retired, died at Morristown, N. J., April 26, 1884.

LIST OF CHANGES IN THE STATIONS OF MEDICAL OFFICERS, U. S. NAVY, FOR THE WEEK ENDING MAY 3, 1884.

P. A. Surgeon H. P. Harvey, detached from Naval Hospital, Chelsea, and ordered to "St. Mary's"

P. A. Surgeon R. H. McCarthy, ordered to Naval Hospital, Chelsea.

P. A. Surgeon J. R. Waggener, detached from "St. Mary's," and ordered to "Hartford."

Surgeon J. C. Wise, detached from "New Hampshire," and ordered as member of Board of Examiners at Annapolis.

Assistant-Surgeon T. C. Craig, promoted to Passed Assistant-Surgeon.

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ORIGINAL ARTICLES.

ON THE REMOVAL OF NASO-PHARYNGEAL FIBROMATA BY THE GALVANO-CAUTERY, OR COLD-WIRE ÉCRASEUR.

BY E. FLETCHER INGALS, A.M., M.D., CHICAGO.

Read to the Section of Ophthalmology, Otology and Laryngology of American Medical Association, May 6, 1884.

Naso-pharyngeal fibromata usually have their origin in the periosteum which covers that portion of the base of the skull forming the roof of the naso-pharynx.

These tumors may extend downward into the mouth, forward into the nasal cavity, or upward, perforating the cranium and pressing upon the brain.

When large, they not infrequently send off prolongations into the maxillary sinus, and in some cases the frontal and sphenoidal sinuses are involved, consequently in some instances great deformity of the face results.

Owing to the obstruction thus caused, respiration and deglutition may be seriously interfered with, and in consequence of the pressure, the senses of hearing, sight, and smell are more or less impaired.

These growths are hard to the touch, and are usually rounded, having a smooth surface, slightly lighter in color than the surrounding mucous membrane; sometimes, however, and particularly when the nasal cavities are involved, these tumors are lobulated in form.

Some of them grow slowly, but in other cases they increase in size with great rapidity; and, unfortunately, they are quite liable to return after removal.

Aside from the symptoms already referred to in connection with the special senses, they may cause severe pain, frequent epistaxis, and constant catarrhal discharge. They eventually disturb the sleep, and prevent the patient from taking sufficient food; exhaustion supervenes, and ultimately, if not removed, they are liable to prove fatal.

Various forms of treatment, such as the local application of chemical agents and electrolysis, have been tried, but nothing short of a complete destruction of the growth by operative measures can give satisfactory results.

The operation recommended by surgeons, consists in tearing or gouging out the tumor after access to it has been obtained by removal of the hard and soft palate, or the superior maxillary bone, the latter being the procedure generally resorted to.

Within a few years laryngologists have demonstrated the practicability of a much safer operation, which has thus far been attended with better results than when the maxilla has been removed.

This operation is performed with the galvano-cautery, or steel wire écraseur, the loop being passed through the nostrils in some cases, and in others through the mouth and up behind the soft palate.

Within the past two years I have operated on four cases of naso-pharyngeal tumors by this latter method, and with better results than could have been obtained by excision of a part or the whole of the superior maxillary bone.

CASE I.—Fibroma. In May, 1881, I operated upon the first case of this kind which had come under my observation.

The patient, J. W., æt. 21, stated that about twenty months previous he had contracted a severe cold, since when he had been unable to breathe through the right nostril, excepting with forced respiration, and then but slightly. The left nostril had also been occluded whenever he had a cold, but at other times it had been comparatively free.

Rhinoscopic examination revealed a large ovoid tumor blocking the right posterior nares and overlying about half of the left. With the galvano-cautery écraseur I removed the larger part of the growth, and would have secured all had not the current failed me, so that I was obliged to readjust the wire, which the bleeding prevented me from doing perfectly.

Prof. I. N. Danforth made a microscopic examination of the tumor, and pronounced it a small-celled sarcoma, the most benignant of the fibromata.

A few weeks later the remainder of the growth was perfectly removed by the galvano-cautery écraseur.

Sixteen months later I found a small tumor at the seat of the old growth, about the size of a hazel nut. This I removed with Jarvis' écraseur.

At the present time, two years after the original operation, a small sessile swelling may be seen at the posterior end of the upper turbinated bone. This presents no point where the écraseur could be made to hold, and as it has enlarged very slowly, I have not attempted to cauterize it.

CASE II.—Fibroma, H.L., aged 19. Was brought me by my friend, Dr. F. E. Olney, of Warsaw, Ind. I found a large naso-pharyngeal growth, which presented slightly below the soft palate, and filled the naso-pharyngeal space.

It had been annoying him very much for twelve months by preventing nasal respiration and causing profuse discharges. The tumor was so large that I

found it impossible to pass Bullocs' canula or an Eustachian catheter through the nares. However, after much difficulty, I succeeded in passing a small, soft rubber catheter through the right nares. In doing this, all excepting half an inch of the distal end of the catheter had been kept rigid by the stylet, so that when pressure was made the flexible end insinuated itself between the growth and the palate, and was finally forced into the larynx. A string was then attached to the catheter, and by means of this an elastic band was drawn through to tie the soft palate forward; and subsequently a loop of platinum wire was drawn back into the mouth.

The loop was opened, and by patient manipulation for about three hours, it was carried up until it encircled the base of the tumor, close to the bone from which it sprang. The ends of the platinum wire were then pushed through the tubes of an electrode, which was forced back to the tumor.

The handle with which the conductors from the battery were connected was then attached, the platinum wires fixed to the ratchet, and the current turned on; but I soon found that a short circuit was established through the metallic axle of the rachet wheel. I then removed the wheel and attached the wire to a lead pencil, by means of which traction was made and the tumor rapidly cut through.

The base of the tumor was divided quicker than if the ratchet could have been used, and as a consequence profuse bleeding ensued, which, however, was checked in a short time by the insufflation of tannin upward behind the palate.

The tumor was slightly nodular in form, and measured one and one-half inches in its antero-posterior diameter, and one and three-fourths inches in its vertical diameter.

It had been cut off close to the basilar process of the occipital bone, to which it had been attached by a pedicle three-quarters of an inch in diameter.

The patient returned to his home the same evening. The cut surface healed over promptly, and for two months he seemed perfectly well, but at the end of that time Dr. Olney noticed that the growth was reappearing. It grew rapidly for about two months, when it had attained nearly half its former size, since when it has remained stationary.

The patient's general health is now perfect. The tumor will be again removed as soon as the patient can spare the time, and then the stump will be thoroughly cauterized.

CASE III.—Fibroma. J. H., aged 26, came to me during the latter part of the winter of 1882–3, complaining only of a slight cold. I noticed a peculiar lack of nasal resonance in his voice, which directed my examination to the naso-pharynx, when I found a tumor about the size of a hickory nut, which, from its position, and from the movements that could be given to it with a probe, seemed to be attached to the upper portion of the posterior border of the vomer.

With a modification of Jarvis' écraseur, half an inch of the end of which had been bent up at nearly a right angle, I passed a steel wire behind the palate and ensnared the tumor.

Up to the time when the tumor should have been nearly cut off, I had no difficulty in tightening the wire by the milled wheel, but afterward it became almost impossible to turn the wheel with the fingers. However, the wire was gradually tightened, and finally, with the aid of a pair of pliers, such as used by gas-fitters, the wheel was screwed down until the wire was released. The tumor presently dropped into the mouth, and was spat out. Upon examining the instrument, it was found that the great difficulty had been caused by the soft tissues being drawn into the end of the canula, which had been split down to the angle by the pressure. The tumor had the form of a flattened sphere, measuring one-half inch in its thickness.[1] Afterward another similar growth was detected in the posterior part of the left nasal cavity, which subsequently came down into the naso-pharynx. I have made one attempt to catch the tumor in the snare, but failing on the first trial, I was obliged to defer the operation for want of time.

CASE IV.—Fibro-Myxoma. A. P., æt 32, machinist, came to the Central Dispensary in December, 1882. He gave the following history: When two years of age, his mother noticed something growing in his nose.

Nothing was done for it until he was fourteen years of age, the growth having increased slowly in size during the interval. He was then operated on, and a large mass was removed.

He was free from the trouble for some time, but at the age of nineteen it had returned so as to necessitate another operation.

From that time until about a year before coming to me he had been free from the trouble.

Upon examination, I found a large growth completely filling the right nasal cavity, and closing the left by pressure.

It also passed back and filled about half the naso-pharynx.

The pressure caused considerable deformity of the nose. After several futile attempts to tear away the anterior portion of this tumor with forceps, about a third of it was cut off with galvano-cautery wire loops. Finally, with a modification of Jarvis' snare nearly all of the growth has been removed, so that there is now no obstruction to nasal respiration, but the treatment is not yet completed. In this case it was impossible to engage any considerable portion of the tumor at once, as the instrument could not be passed through the nose until most of the growth had been taken out; therefore, at each sitting, I removed two or three pieces about the size of filberts, and then allowed the patient to go.[2]

At the meeting of the American Laryngological Association held in New York, in May, 1883, Dr. Rufus P. Lincoln presented three cases which he had operated upon successfully by the galvano-cautery écraseur. For the sake of comparison, he also gave a tabulated statement of the results of seventy-four operations for naso-pharyngeal tumors which he had found reported.

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[1] Dr. E. P. Davis, of this city, examined the growth microscopically, and reported it almost wholly fibrous.

[2] Dr. E. P. Davis found this to be a fibro-myxoma.

The statement which has been furnished me by Dr. Lincoln is substantially as follows:

The seventy-four operations were performed on fifty-eight patients.

Thirty-nine operations were done upon twenty-eight patients by section of the facial bones or laying open of cicatrices resulting from previous operations of the same character. Of these, in thirteen, the record ceased shortly after the operation, and the final results were unknown. Of the fifteen remaining, eight died from the operation, and in three others it nearly proved fatal, while in only four was there no return of the tumor within a year.

Seven operations were done on seven patients by scissors, knife or forceps. One of these died, five were lost sight of, or no subsequent report was made, and in only one are we told there was no recurrence within a year.

Two cases had been treated with injections of chloride of zinc, or cauterization by the same agent. In one the tumor returned, the other case was lost sight of. Three cases were treated by electrolysis. One did not recur within a year; the others disappeared. Of these forty cases, in twenty-one the history after the operation was incomplete, and probably not favorable to the operation.

Nine, nearly one-fourth of all the cases, or about one-half of those in whom the history was complete, died, and only seven remained well for one year.

Contrasting with these the cases operated upon by the ordinary écraseur, or ligation, we find that of eleven operated on none were fatal, two were lost sight of, and of those remaining there was no recurrence at the end of a year in four cases, which is a very much better showing than for the preceding operations.

Nine have been operated on by the galvano-cautery écraseur, and one by the actual cautery. None of them were fatal; two were lost sight of, and six were well at the end of a year, results infinitely superior to those of any of the other methods.

The remarkable success of this form of treatment is doubtless due to thorough cauterization of the stumps of the tumors, which has been practiced in several instances. In my own cases, the stumps of the tumors have not been cauterized.

In one there was no recurrence at the end of a year. In another there was speedy recurrence.

In the others the operation is not yet completed, and as they were dispensary patients, the disagreeable symptoms having been removed, it is probable that I will not see them again until the tumor has regrown sufficiently to be annoying.

From my experience in these cases, I believe that either with the galvano-cautery or with the steel wire écraseur the great majority of these tumors may be completely removed, and, as has been shown by Dr. Lincoln, if their bases are thoroughly cauterized with the hot wire, they are not likely to recur.

The results thus far are greatly in favor of this method of operating over that usually advised by general surgeons, for this leaves no scar, the tumors are less likely to recur, and the risks of the patient are infinitely less.

JEQUIRITY.

BY T. E. MURRELL, M.D., LITTLE ROCK, ARK.

[Read before the State Medical Society of Arkansas, at the Eighth Annual Session, Little Rock, May 30 and 31, 1883.]

Jequirity, *abrus precatorius*, is a small shrub of the order of leguminosæ, growing in tropical America, which bears a beautiful coral-like bean, commonly known as licorice bean. In Brazil the natives have a formula for making an infusion from the bean, which they use in granular conjunctivitis. According to the formula, 32 beans make about two pints of the infusion. The method of using it is to brush it on the inner surface of the lids, instil it into the eye, or apply it on compresses to the outer surface of the lids, by means of which some of it comes in contact with the conjunctiva and cornea.

The literature on the use of jequirity up to the present time is rather meager. In the *American Medical Weekly*, of January 20, 1883, there is this notice:

"Jequirity in Granular Conjunctivitis. This drug, so much vaunted of late in the treatment of granular conjunctivitis, has not yielded very good results in the hands of Dr. Ferrier. Cardoso, of Rio Janeiro, claimed to have secured excellent results by the use of a topical application of one part of the drug to one hundred of boiling water to the granulations. Wecker has had the same experience as Ferrier."

It seems that a different construction has been put on De Wecker's report of his use of it, which I have not seen, by Dr. Gruening, of New York. In the *New York Medical Record* of May 17, 1883, he says: "The gratifying results obtained by De Wecker in his cases of chronic granulation and corneal opacity, induced me to employ the infusion in a few cases of inveterate pannus." Gruening then reports two cases where he used the infusion of licorice bean with the most gratifying results. One was a man 55 years of age, and the other a girl of ten years. In ten days both were dismissed with smooth lids, free of granulations, and a total disappearance of the pannus.

Now and then one comes across a case of granular conjunctivitis that fails to yield to all ordinary or extraordinary treatment; where there exist excessive granulations and inflammatory infiltration of the conjunctiva, a dense and perhaps fleshy pannus, with intense photophobia and lachrymation, completely wearing out the sufferer, and rendering him hopelessly blind.

I had just such a case on hand when I read Dr. Gruening's paper, and at once wrote to Mr. Richard Fingerhut, druggist, 404 Fourth Ave., New York, for some of the beans. He wrote me that he sold the infusion ready prepared, and so I ordered a pint of the infusion. I used it as did Dr. Gruening, brushing it on the conjunctiva three times daily, and keeping a cloth wet with it on the eyes almost constantly.

The patient had been suffering most excruciatingly for several weeks. The pannus was so dense that he could only perceive light, the right cornea had

yielded, and was in a condition of kerato-conus, and the inflammation was of a severe type, the villi of the palpebral conjunctiva being greatly hypertrophied and engorged.

Twenty-four hours after commencing the use of the infusion, a scarcely perceptible change in the inflammatory process had begun. Forty-eight hours brought a well-marked increase of the inflammation, with beginning œdema of the lids, some increase of pain, and a beginning diphtheritic membrane on the conjunctiva. Three days' treatment increased all the symptoms, with a well-marked diphtheritic membrane covering the whole conjunctiva. A microscopic examination of it showed a fibrinous mesh filled with pus and mucous corpuscles, and young epithelia. The patient began now to complain bitterly, and insisted on stopping the medicine. I ordered it continued, with the effect of only very slightly increasing the inflammation in two more days. There now appeared a tendency to furuncular inflammation in the lids, necessitating opening at one point two or three days later, to evacuate the pus. At this period, the infusion was stopped, and a ten-grain solution of boracic acid was directed to be used freely. The inflammation rapidly subsided, and in four or five days had about disappeared. The conjunctival surface was now smooth and rather glistening, the cornea was almost totally free of vascularity, but uniformly opaque; and the patient, for the first time in many weeks, felt comfortable, and was able to sleep soundly. He was much encouraged, and so was I. No decided change in the acuteness of vision occurred, however, contrary to expectation. While the blood-vessels disappeared from the cornea, the infiltration remained. The eyes remained in *statu quo* after about the fifth day from stopping the infusion for about three weeks. The old trouble seemed to be now returning. There was a good deal of vascularity of the cornea and inflammation of the conjunctiva, with photophobia, lachrymation and ciliary neuralgia. I again put him on the jequirity, used as before. From the first, he said it felt soothing, and in twenty-four hours he experienced much relief. This could not well be attributed to the moisture, since he had been freely using water to his eyes previous to the treatment without such relief. The inflammation now began to assume a muco-purulent character, without at any time forming a diphtheritic membrane. By the fifth day, there was considerable œdema of the lids, with a free muco-purulent discharge from the eyes. The jequirity was now discontinued, and only cold water used on the eyes. The inflammation as rapidly subsided as under the boracic acid, the vascularity disappeared, and in a few days the conjunctiva was smooth and glistening. The cornea began clearing, and up to this time, about ten days from the leaving off of the infusion, vision has improved from mere perception of light to counting fingers at arm's length, with a steady and quite perceptible increase of visual power from day to day.

Before the treatment the pupils were not visible through the opaque and vascular corneæ by oblique illumination with a condensing lens. Now the whole iris is distinctly seen by the same method.

The right cornea seems to be clearing equally with the left, but owing to the excessive alteration of curvature, but little practical vision can be expected with this eye.

There is now no photophobia or ciliary neuralgia, and the patient is quite comfortable.

How long improvement will continue and when stop, and whether the granular conjunctivitis will again return, remains to be determined. From the present smoothness of the lids one would infer the absence of danger of a return.

The short history of this method of treatment in this country does not yet admit of any reliable statistics on this point.

What the peculiar principle in jequirity is that causes it to excite a muco-purulent or diphtheritic inflammation of the conjunctiva, that so rapidly subsides when the remedy is stopped, remains so far a mystery. It cannot be an irritant, since it is perfectly bland when applied to the conjunctiva, and it is only after one or two days' constant use that any inflammation is excited by it.

The infusion is a slightly opaline fluid, with a very small quantity of flocculent sediment. It has a faint narcotic smell, but I have not adventured so far as to taste it. The microscope shows the sediment to consist almost entirely of masses of rod-shaped bacteria, while throughout the fluid they are found in considerable numbers.

After a few weeks, a peculiar fungus scantily develops in it.

The finding of the bacteria was somewhat startling to me, since Mr. Fingerhut had written me that the infusion would keep indefinitely; so I wrote him to know if they were peculiar to the fluid, or accidental, or, perhaps, *the active principle!*

In reply Mr. F. wrote as follows: "Your observations are in every regard corresponding with others, hence the theory that the infusion only acts as a *lymph*, or the transplantation of bacteria. I, personally, am of another opinion, and will surrender only when all results experienced are in favor of the bacteria theory. I have reports from different parts, and although unable to form a satisfactory judgment about the cases, it seems that the majority support the bacteria theory."

In examining the diphtheritic membrane and discharges from the conjunctiva I had expected to find the same kind of bacteria as in the infusion, if they were the specific agents in causing the inflammation, but I did not succeed after very close search.

Thus stands the subject to date. From reports coming in from the proceedings of medical societies, the trial of jequirity in granular conjunctivitis is being extensively made. It is to be hoped that in it we have a remedy for that most formidable and hitherto often irremediable condition of inveterate pannus and chronic granulation of the lids.

When its method of action has been established, and its clinical uses discovered, it may be found not to act injuriously on the healthy cornea, and may prove curative of granulations in the more recent stages, thus obviating the disastrous consequences so characteristic of granular conjunctivitis.

SUPPLEMENTARY REPORT ON THE USE OF JEQUIRITY.

The above paper has been three months in the hands of the publication committee, and during that time I have had under observation the patient submitted to the jequirity treatment, and up to this writing, September 4, his lids have remained free from granulations, and but for the staphylomata, which had occurred previous to the treatment, his vision would doubtless have been quite good.

Within this time I have also treated one other case with it which is deserving of a short notice. This time I procured some fresh beans and made the infusion myself, and began its use as soon as ready.

The effect was almost immediate, setting up a purulent conjunctivitis in twenty-four hours, with great pain and œdema of the lids. Patches of false membrane appeared on the conjunctiva in thirty-six hours, and by the end of the fourth day the inflammation had run so high, and the suffering of the patient was so intense, that the applications had to be stopped. Boracic acid solution and cold water were now freely used, but the pain and photophobia continuing, an examination was made to ascertain the cause, and to my chagrin I discovered that I had a case of iritis with strong pupillary adhesions to deal with. A six grain solution of atropine was immediately applied, which, in a few minutes, produced intense pain followed by great œdema of the lids. A two grain solution was then tried with similar result. About six hours' disuse of the atropine sufficed to restore the eye to its original condition, but another application was quickly followed by the œdema of the lids and acute ciliary pains.

The jequirity in this case seemed to render the eye susceptible to atropia, as it had been repeatedly used before with no untoward effects.

In this patient there was pannus of the upper half of the cornea, with a small, central, clear-cut corneal ulcer. The keratitis was greatly increased by the jequirity, and a small onyx was formed at the lower border from gravitation of pus. In a week after stopping the jequirity the infiltration of the cornea had disappeared, it was nearly avascular and quite transparent. The granulations of the lids seemed to be entirely removed, leaving them smooth and pale. At the present writing, the patient is nearly relieved of his iritis, which will leave some posterior synechiæ, on account of his inability to bear atropia. The other eye was not treated with the jequirity; as it had rather a deep corneal ulcer with but little pannus, I feared a diffuse keratitis, a fear which was perhaps well founded, seeing the effect on the eye that was so treated.

The question as to the active agent in the jequirity which excites the peculiar form of conjunctivitis, was well proven to my mind, in this instance, not to be bacteria. The microscope showed no bacteria whatever when beginning its use, and its effect was quicker and more powerful than the preparation formerly used, which was some days old and contained abundance of bacteria. The specific agent is evidently some principle in the licorice bean, and it remains for chemistry to separate it.

April 21, 1884.

As the foregoing reports have not yet appeared in print, I will bring down to date my experience with jequirity, and give an account of some experiments I have made with it in comparison with other infusions microscopically studied.

To state in general terms, without reporting special cases, I find that the grade of inflammation is proportioned to the strength of the solution, and the freedom with which it is employed. Of the strength commonly used, and as I have used it, constantly applied with compresses wet with it, the effect is quick and reaction high, running sometimes a violent course; but if dropped in the eye, or brushed on the everted lids, three or four times daily, it induces to only a mild croupous conjunctivitis, which may be kept up for a much longer time than by the other method, and with much less suffering to the patient and risk to the eye.

Some cases of purulent corneal infiltration and severe iritis have led me to regard the cautious use of this remedy important.

I have found in several cases a return of the granular conjunctivitis after one course of treatment by the De Wecker plan, but have found them amenable to a second course, after which I have so far known of no recurrence. The milder inflammation, longer continued, seems equally as effective, and perhaps more so, and is decidedly more tolerable to the patient.

It is best to instil atropine into the eye daily while under the treatment, to guard against iritis.

I now prepare the infusion by crushing three or four beans with pincers, and having put them in a two-ounce bottle, add water, and keep them in a warm room. In twenty-four hours this is ready for use, and this amount is sufficient to treat two or three patients. The bottle should occasionally be shaken, to insure mixing. The opaline supernatant fluid contains all the strength of the infusion.

The opinion entertained by many, that the peculiar effect of jequirity is due to a bacterium, has led me to investigate this somewhat. As is known, this bean belongs to the leguminosæ, and when crushed, or in infusion, has a striking narcotic odor, more or less possessed by all the species of this order.

By way of comparison, I prepared a two-ounce infusion of jequirity and several other kinds of beans at the same time, and studied them daily for some time. Here is the result:

INFUSION TWENTY-FOUR HOURS OLD.

Jequirity—A few active rod bacteria; strong narcotic odor.
Early English pea—No bacteria; no narcotic odor.
Marrow-fat English pea—No bacteria; no narcotic odor.
Large black bean—Numerous rod bacteria, with little motion; faint narcotic odor.
Large striped bean—Rod bacteria, some sluggish, some in active motion; faint narcotic odor.
Large flat white bean—Rod bacteria, a few sluggish, a few active; faint narcotic odor.

INFUSION FORTY-EIGHT HOURS OLD.

Jequirity—Bacteria multiplied considerably, some sluggish, some active; odor unchanged.
Early English pea—An occasional rod bacterium seen in slight motion; odor unchanged.

Marrow-fat English pea—No bacteria; odor unchanged.
Large black bean—A great abundance of rod bacteria, some active, some sluggish, some in zoogloea masses; odor unchanged.
Large striped bean—A great abundance of rod bacteria, some having many joints and forming chains; odor unchanged.
Large flat white bean—Myriads of bacteria, many actively moving, but the majority formed in clusters and zoogloea masses; odor unchanged.

INFUSION THIRTY-SIX HOURS OLD.

Jequirity—Same as last examination.
Early English pea—Myriads of bacteria and micrococci; odor putrid.
Marrow-fat English pea—Myriads of bacteria and micrococci; odor putrid.
Large black bean—Bacteria in great abundance, singly and in masses; odor somewhat disagreeable.
Large striped bean—Same as the black bean.
Large flat white bean—Same as the last two.

By the next day, the three bean solutions had become strongly disagreeable from the odor of decomposition, and were opaque with bacteria and micrococci. The jequirity continued the same from day to day, there being no increase of bacteria after forty-eight hours as long as kept, and at the end of two weeks it was free of any odor of decomposition, and retained without loss the characteristic smell.

The bacteria were now less active than when the infusion was fresher, scarcely moving at all and not very numerous, in fact, they were never numerous compared with the other infusions when thirty-six hours old.

In real warm weather, the infusion of jequirity takes on a faint odor of decomposition after several weeks. From my studies I infer that,

First. The specific action of jequirity depends on some property peculiar to the bean itself, and not to the bacteria, which accidentally develop in the infusion.

Second. There is a preservative principle in the bean which resists decomposition to a remarkable extent.

Third. The infusion of jequirity is inimical to the successful development of bacteria, and restrains their multiplication.

NEW ORTHOPEDIC AND FRACTURE APPARATUS—THE UNIVERSAL SUSPENSION SPLINT.

BY DR. W. P. VERITY, CHICAGO, ILL.

[Read before the American Medical Association, meeting of 1883.]

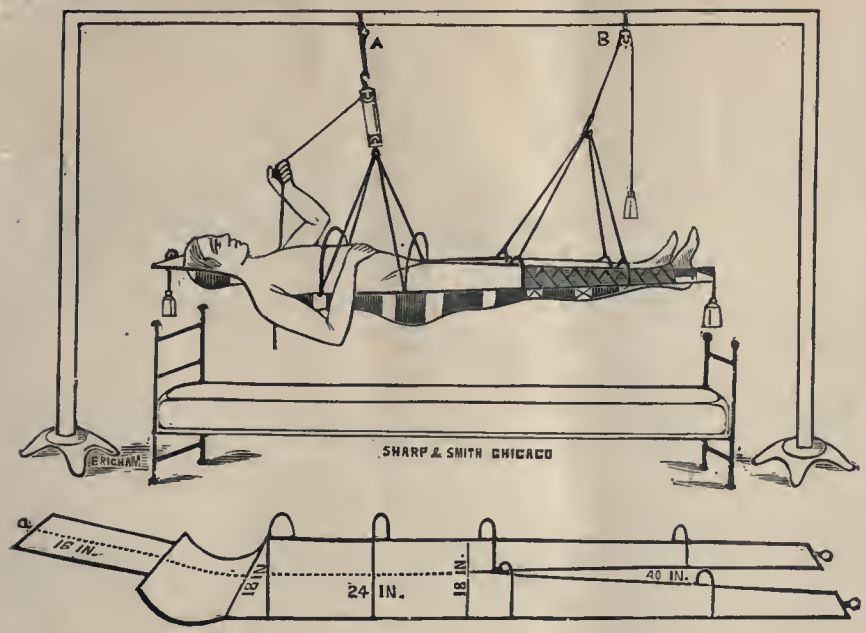
This splint can be made of gas pipe or rod iron; the first is preferable, and if it be used, one-half or five-eighths inch pipe should be employed for adults, and three to four-eighths inch pipe for children. The splint consists of a headpiece, body, extremities and arches. The arches over body should be made of material of the same size as the body of splint, and those over extremities of lesser size; arches should in all cases be twelve inches high. For children, one arch over the body and one over each extremity will be sufficient. If the adjustment be employed, the latter are unnecessary, as they interfere with its working. The dimensions may be arranged to suit the case. If the patient be five feet long, and sixteen inches broad across the shoulders, the splint should be sixty-six inches long, and twenty inches broad across the shoulders are all that will be necessary. Three sizes in practice to meet the usual emergencies.

Cut 1 illustrates the type of splint first made in 1880, which was made of rod iron.

Cut 2, the present form of splint, made of gas-pipe.

The adjustment is seldom deemed necessary, and the arm-rests at A, while convenient, can be dispensed with. The standard B, passing upward from the perineal portion of splint to a horizontal connection with the body arch, is indispensable, since it is needed to give strength to the apparatus and increased facility to the operator. As seen in cut 3, adjustment is obtained by having one joint inside of splint E, A, and one at the junction of the standard B with the rod I; the latter telescoping into the gas-pipe G, and is held at the desired point with set screw H, and this permits of any desired amount of abduction, as shown by the dotted lines. The foot-piece, of sheet iron, is constructed so as to slide upon the gas-pipe with but little friction. The rubber band, C, is tied to the foot of the splint into eyelet of set screw, which last fixes the foot piece at any desired degree of *inversion* or *eversion*. As the extremity is considerably wider at I than C, the foot-piece is easily removed by sliding in the direction of G. The foot-piece is rarely an absolute necessity.

In applying the splint, it should be suspended from the ceiling or a frame by compound pulleys, as shown in cut; common clothes line can be employed, and should be tied to the arches or sides in such a manner as to equalize the weight on the pulleys, and prevent undue strain on the joints of the splint; two compound pulleys are needed for adults; one will suffice for children. While the splint is being applied, the patient should lie on a mattress without pillows; the splint is placed over the patient without touching him at any point, and allowed to rest only on mattress. Strips of any firm cloth; canvas is the best, should now be passed under the patient, and the ends of the same should be fastened over the sides of the splint by stitches, pins, buttons or hooks. For the body it is best to use one piece, reaching from the coccyx to the cervical region. Care should be taken that the cloth is free from wrinkles. (The patient and splint should generally lie flat on mattress, and not remain for a long time elevated above it; a change of this kind rests the patient. A pillow may be placed between the head and the splint. If an extensive burn exists on the back, the patient can lie face downward on hands. If one leg only be injured, the other leg can be left free. In case the patient be of such a size as to render the splint unavailable, the mattress should be turned diagonally to the



Figures 1 and 2.

bed, and the splint applied; the bed should then be replaced by a cot). When this is done, the splint is applied.

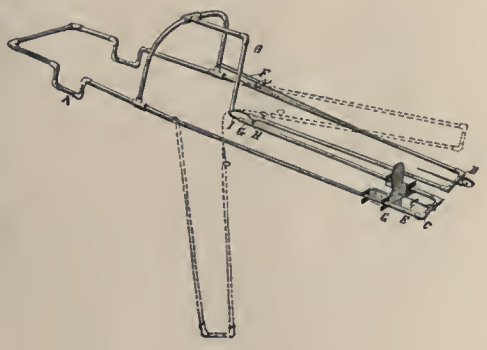
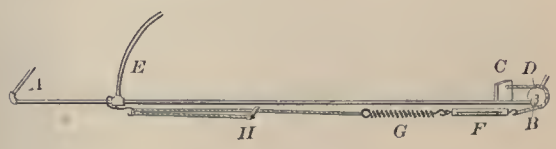


Figure 3.

The application of the splint is almost universal. Its chief recommendations are: The ease with which it is applied, whatever be the nature of the injury; its perfect safety; the comfort experienced by the patient in the ease with which his wants are attended to by any one, without disturbance to the injured parts; the readiness with which the surgeon can rearrange dressings independently of the situation of the injury; the ease with which the bed is cleaned without discommoding the patient. The band can easily be rearranged. In a complicated case, where extensive wounds or bed-sores exist, the patient should be placed on a cot, to secure convenient access on either side; he should be raised two feet above the bed; if now the bands require change and the patient needs washing, he can be supported temporarily, but firmly and securely, by passing two pieces of leather belting two inches wide diagonally under him, which cross at sacrum, and are fastened to the sides of the splint by hooks; thus all support can be removed, and the most extensive surface carefully dressed. This done, the dressings should be arranged on the bed in the desired order of application, and then the patient let down on them, the belting removed, and the bands of support applied as at first. An air pillow can be used, and any variety of dressing; a fracture box, plaster cast, or oakum can be attached to patient or splint in the most satisfactory manner.

Extension of both extremities and head can be obtained when required. It can be secured by weight, pulley, rope and spiral spring, as shown in the following cut:



A, head part of splint. B, rope over the pulley D. C, block for adhesive plaster from lower extremity. E, body arch. F, scale indicating amount of extension. G, spiral spring. H, regulator of amount of extension. If marked counter-extension is required at the foot of splint, can be elevated with a compound pulley.

Surgical Uses.—These are numerous: In fracture of the vertebræ, pelvis, thigh, leg, or both lower extremities; resections of hip or knee; extensive burns or bed sores, etc.; operation for radical cure of hernia, it will be found of value, since the patient can readily be controlled in it.

Medical Uses.—In inflammatory rheumatism, paralysis, low fever, or any disease which renders the patient helplessly bed-ridden, and necessitates change of the patient for cleanliness, etc., the splint proves of great service.

A Derrick and Improved Suspension Apparatus for Application of Plaster Casts.—The original feature about the present is the derrick which is constructed of four hardwood strips, A, B, C, D, joined together in such a manner that the strips become parallel when folded, as indicated at E. The nature of the derrick can be ascertained from the cut. The strips should be three inches broad, an inch thick, and three feet long. In strips C and D is a slat, H, which permits of adjustment for any emergency, and is fastened with a thumb screw. The range of adjustment is indicated at E, F. The

strip B projects over D two inches, and at this point is a slat admitting a knotted rope at H, which serves for the suspension apparatus, rendering unnecessary the use of hooks, bolts, etc. This derrick can be used under almost every conceivable circumstance. It is attached by the clamp G.

THIS SUSPENSION APPARATUS, like other suspension apparatus, is used with a compound pulley, but unlike all other apparatus, is economical, easily applied, and does not incommode the patient, as there is no buckling connected with it. The method of adjustment is seen in the cut. The head piece is applicable to any person.

THE PORTABLE NATURE of the whole apparatus may be judged from cut above, which shows the whole apparatus arranged for transportation.

MEDICAL ETHICS.

BY DR. E. H. BOWMAN, ANDALUSIA, ILL.

[Read before the Iowa and Illinois Central District Medical Association.]

It is with great diffidence in myself that I presume to call the attention, and occupy any of the time of your honorable body, to the fact that, as a profession, we have a National Code of Ethics. The time was, in the not very remote ages of the past, when the profession did not have any code of morals, when every member was a law unto himself, and the majority seemed practically to adopt the Ishmaelitish tactics, involved in the patriarchal description of the progenitor of the tribe of Ishmael, viz.: "His hand is against every man," in the practice of the medical profession. As a consequence, the sense of justice, honor, and fidelity to truth (which nowhere on earth finds more fitting and appropriate lodgment than in the bosom of our profession), was, by the eternal law of self-preservation, compelled to obey the other eternal law of evolution, and formulate some of the most important principles involved by its relations with the world, and themselves, into a code of ethics. There may be men who call themselves doctors, who may be surprised to learn that the profession has any moral principles at all. And there are doubtless hosts in the outside world to whom it may be surprising news that there are any such ideas as justice, honor, and fidelity to truth, in the foundations of the temple of medicine. Let us glance for a moment at the field occupied by the science of medicine, for it is a fact that it has grown from the lowest plane of fetichism, with the grossest conceivable superstitions, into the magnificent proportions of a temple of science. Man, so far as we know, is the culmination of the great law of evolution on this planet. In him all lines of development meet and rise to the plane of the moral and spiritual being, with faculties to take in and comprehend his relations with the universe. He is the microcosm, in his own self-epitomizing the macrocosm. Our profession is the only one on earth that takes for its sphere this wonderful product of evolutionary force, in its

entirety. All other professions are limited and partial in their range and scope, dealing only with certain limited interests and faculties, in partial relation to the whole. Our profession comprises in its grasp every cause that operates on man from his lowest relations with the world of matter, up to the highest intellectual, moral, and spiritual developments and relations. There is no conceivable phase in the origin, development and termination of human life, that does not come within our sphere legitimately and necessarily. These premises being incontestably true, how apposite and indispensable, then, that we should have a code of ethics regulating or making law for all these multiform interests, in our relations with our grandest and holiest of all professions, with its members, and with all the dearest, most vital and sacred human interests and relations.

This Code of Ethics has been formulated by some of the best medical minds in the American Medical Association, and presented, with all the prestige and authority, and influence of the organization, for the acceptance, loyal adhesion to, and guidance of all worthy members of the regular medical profession. Every man who receives the degree of doctor of medicine from a school in affiliation with this highest medical authority in the nation, and for that matter in the world, is under the most binding honorable obligation to strictly conform his professional life and practice in harmony with the requirements of this Code. Let us take a succinct review of some of the leading features of our fundamental law, and see if there is any feature that a man of strict sense of justice, honor, or truth, can reasonably take exception to. And here we will say, that in our opinion, the framers of the code, while most earnestly honest and true in comprehensive regard for the dignity, integrity, honor and usefulness of the medical profession, yet were somewhat lacking in the faculty of order, and the proper or most correct sequence in treating of the profession, and its relations and multiform duties and rights. So we crave your indulgence in taking the liberty of departing somewhat from the order in which the subjects are treated in the Code, and take them up in such order as appears to us most natural and consecutive.

Passing over until we arrive at Article V, we come to the first attempt to give any definition of the profession. Section 1 of that article says: "Medicine is a liberal profession, and those admitted into its ranks should found their expectations of practice upon the extent of their qualifications, not on intrigue and artifice." This simple enunciation is far-reaching in its grasp, and goes deeply toward the eternal basis on which alone we can securely rest, and from which we can safely and surely contribute the master builder's share in the construction of "The Bridge of Precious Stones and Pearls," figured by that transcendant genius, the immortal Gœthe (whose prophetic and philosophic eye took in more than any other man had ever expressed, the full truth of the capabilities of man's development, and the relation of scientific truth thereto), in his wonderful allegorical production which he called "Das Marschen," or The Tale. This I believe he never explained during his life, perhaps for the reason that in his vast comprehension he saw that few, if any, contemporaneous minds were in the advanced stage of intellectual development to be capable of truly comprehending the truth, as from his intellectual mountain-top it clearly appeared to him. It begins to dawn, after these many years, on the advanced minds of this day, that the magnificent temple that was being formed in darkness and in the depths of the earth, and was gradually rising from "the dark profound," was intended to prefigure man in the glorious plenitude of his upward development, when the accumulation of precious stones (scientific truths) had builded the bridge which, like a celestial highway, spanned the chasms, rivers, and obstructions which imperfect development, ignorance and superstition had made or imagined in man's nature, with the "man with the lamp, whose clear radiance (reason) illumined everything on which it shone," bringing all the "disordered combinations" of soul-saving machinery into harmonious accord as ministrant servants in the upward progress of the temple where the whole world will one day worship, no longer feeling that man's nature is a wrong and a mistake, but one of the grandest notes of harmony in "the music of the spheres." And right here, at the risk of being considered in my old age a visionary enthusiast, permit me to express my profound conviction of the truth set forth in this strange form by one of the very few mountainous-minded men, whose summits pierce all the clouds of ignorance, superstition and imperfect development, and bask in the clear, eternal sunshine of truth. Man, as I said in the commencement, is the highest form of evolution known to us, or, to use a more trite form of expression, "the highest revelation which the Infinite has given of Himself on this planet; also to add my absolute conviction that the part our profession is destined to play in this grand march of humanity's upward progress will not be, cannot possibly be, a secondary one. Then, if such a destiny is before us; if we are so surely to have largely the formative hand in moulding the mighty agencies into shape, and the directing will to guide them into place, and the constructing skill to build the bridge, why should we not proudly raise our banner on high in the shape of a Code of Ethics as perfect, clean, pure and manly as human skill can formulate, and in view of the almost inconceivable magnitude of the interests committed to our keeping, and which are constantly damaged by unfaithful and recreant members, proclaim professional death to all traitors in our ranks. Why should we ever permit or sanction, or in any way wink at, the truculence which trails our grandest of flags in the mire, by joining professional hands with any of the harpies of empiricism, who befoul with falsehood every clean thing they touch? Every principle of honor and truth, it seems to me, must rise in indignant protest against such prostitution. There was in the camp of Israel of old, we are told, a character they called "Achan." He, I believe, was a Levite, and dedicated to sacred service, but he had an evil, selfish, thievish soul; so he pocketed the "wedge of gold," and filched the "Babylonish garment," which were set apart for sacred purposes, to enrich

himself and clothe his corrupt body with the rich vestments reserved for sacred use. He belonged, doubtless, to the "bread and butter brigade." We doubtless have numerous representatives of Achan in our camp, men who, like Esau, would sell their birthright, if they had any, or their soul, if they possess the article, for a mess of professional pottage. I believe, if my memory serves me, they on conviction of the traitor led him forth without the camp, and put him ignominiously to death by hurling rocks forcibly against his sinful body. Served him right. So should we be merciless. The greater the trust, the greater the crime of betrayal. The Israelites spared not the traitor who ministered in holy things. No danger of a Cincinnati mob there, exasperated to madness by the failure and perversion and debauching of all the machinery of law and justice. Swift justice is done on proof of guilt. The camp is secure and at peace, and those sympathizing with the recreant traitor, or having a proclivity of itching fingers, are at once put into a more wholesome state of mind. We should not spare even the tallest leaders. Oftentimes the more elongated the spinal extension, the weaker the column.

The age of superstition is not yet passed. Few, if any as yet, can truly say their emancipation is complete. Mankind are caught by the glamour of superstitious credulity, in the meshes of unprincipled charlatans, and are fleeced out of money and manhood. Shall we compromise with the many temporarily successful falsehoods, and be of the selfish, weak-kneed, truculent, timeservers, of the bread and butter brigade, who strike hands with empiricism? I think I can hear in every manly soul among us a most emphatic response, coming up from the manly depths of his soul, "No!" Like the dying Lawrence, rather even in prospect of defeat and death, who that is worthy would not prefer to join in with, and swell the strong cry: "Don't give up the ship!"

"Our country embraces Atlantic's wide crest,
And opens to sunset her gateway of gold."

Such width of space unavoidably gives room for wide divergence of views. It used to be the East and the West simply, but now what used to be *par excellence* the West, has become in our wonderful progress the center. From being the home of every ultraism in politics, religion, or medicine, it is rapidly evolving out of this conglomerate confusion the character of scientific conservatism. When the life of the nation was in deadly peril, and armed hosts of traitors were disputing its right to maintain its existence, the same place that now aims to pull down our professional flag, and besmirch its immaculate folds in the mire and degradation of empiricism, then got up riots in opposition to the legal and just measures of our government for the preservation of its own life. Where then were Illinois and Iowa? Was the ear of treason ever tickled with the sound of a draft riot in Iowa or Illinois? No, a thousand times no. With lavish hands they poured forth a stream of regiments, that were not hireling mercenaries, but made up of their most priceless treasures, their own noble, heroic, stalwart sons. Their blood was shed in torrents on nearly every battle-field of the war for the Union. Iowa and Illinois clasped hands across the Father of Waters, and vowed that they would not cease the fight until its beneficent current should "flow unvexed to the sea." New York has the infamy of being the worst governed city in the Union, if not in the world. It did not succeed in stopping the war or draft. To-day it presents to us another rebellion of a most destructive nature, in the shape of a treasonable war on the Constitution of our National Association. Specious and plausible arguments are produced in profusion, as all treasonable movements are thus bolstered up, to show why one stone after another may not, just as well as not, be picked out and dispensed with from our constitutional underpinning. One by one they would pick them out with the soft, traitorous cry, "it is only a little one," until finally, if we permitted the treachery, we would find our foundation gone, and the grand temple of medicine swinging in the air at both ends, ready to fall in ruin over our heads. I much mistake the stalwart, conservative sense of the medical profession of these two central sister States, if they do not again clasp hands over "The Code of Ethics" in this treasonable war, which finds its greatest encouragement in the city of draft riots. Look over the field as carefully as we may, it seems to my view very difficult, if not impossible, to find any wrong features in the Code. There is absolutely nothing that an honorable, true man would be likely to take serious exceptions to. There is nothing but what is well calculated to impress a proper man with a just view of the sanctity and exalted character of the profession of our choice. Those who make war, however speciously, upon it, are in imminent danger of finding themselves in the exact category expressed by that eminent satirist, Hudibras, when he penned his famous couplet,

"No rogue ere felt the halter draw,
With good opinion of the law."

When a member unwittingly and ignorantly transgresses any of the principles of the Code of Ethics, he deserves admonition, counsel, and instruction. But when a member intelligently and wilfully violates any of the principles of the Code of Ethics, he should be as remorselessly cut off from honorable membership as we amputate a gangrened limb to save our patient's life. Instances have doubtless occurred, and may occur again, in which such reckless disregard of any honorable principle of action is exhibited, as to justify the conclusion of moral idiocy or absolute ignorance of the existence of any moral code. Perhaps if ever, by accident, they act as if from principle, they may be the subjects of the same surprise as was expressed by the witty John VanBuren, when in the campaign of 1848 he took the stump in New York in favor of free soil. At the close of a speech he was warmly congratulated by one of the ancients on having got hold of one of the great moral principles of the age, and most urgently advised to adhere to it.

"Ah, indeed," quoth John, "I am rejoiced to learn this, for by —— it is the first moral principle I ever have been charged with possessing, and I'll stick to it like a pig to a root."

There was hope in John's case, there may be in the erring if they will only "stick to it" when they have

found out or been instructed in a correct principie. Our profession is a liberal one, in that it is an open one. It has no concealments. It does not deal in, or tolerate patents or secret formulas. It is really and truly scientific. A host of earnest, patient observers and workers in its ranks for ages have been engaged in delving in the mines where the jewels are found, and little by little, by slow accretion, they have added each his mite, until our profession now finds itself on the threshold of the most advanced and exalted position of any human, or so-called divine profession. What additions to the domain of scientific medical knowledge have ever been made by any of the cloud of empirics that have hovered like vultures on the flanks and rear of our noble army of workers? Their only work is piratical. They have not a solid, valuable fact in their possession that they have not pirated from the accumulated stores of the regular profession. And with an assurance that might put brass itself to shame, they step forward with their stolen goods, claim to be educated in the groundwork of our profession, and claim fraternal recognition for the abnormal monstrosities they are busily engaged in palming off upon an ignorant and credulous world. Let the feeble knees shake. Let the weak spinal columns succumb. Let the bread and butter brigade desert, and meekly go over and make submission to the pirates that impudently demand their allegiance. We can afford to lose all these, and be stronger, cleaner, and better for the riddance. We can part with all these, and retain our honor unsullied. But to voluntarily lower our proud ensign, would be such a humiliating acknowledgment of weakness and defeat as would require many decades to retrieve us from the dire disgrace.

Our Code of Ethics tolerates nothing but truth. It entertains no false facts. To endeavor to carry a falsehood is well illustrated in the tale of "Sinbad the Sailor," who kindly undertook to carry for a while the poor, little, decrepit, worn-out, Old Man of the Sea. When the dwarf was fairly seated astride of the sailor's neck he clutched his benefactor's throat with the grip of a giant. It ended in a struggle for life. So with us—we cannot afford to part with a single principle of our Constitution. We may think this controversy in the East over the Code is only "a little tempest in a tea-pot," but to my feeble vision its portent is of vastly greater proportions. It looked to the superficial view as if the war would be over in ninety days when Sumpter was first fired on. But Sumpter fell, and the war raged over four horrible years of carnage. Yet, nevertheless, the nation did not die. In the defection in New York at the present time we may find our medical Sumpter. But, in that event, we need to gird on our armor here in the center, close up our ranks, and with lock step, shoulder to shoulder, present an unbroken front to the pirates and traitors who would haul down our flag. Instead of lowering our national ensign, we can better afford, proudly and defiantly, to write on its gleaming folds, in golden letters, Excelsior. Truth is mighty. The eternal years are hers. We claim to be sincere devotees at her shrine. In our eager quest for jewels in the mines of truth, it is not an uncommon thing to find a spurious stone, which puts on the deceptive appearance of a genuine gem. This may deceive the unwary, and pass for a time current on the world's exchange. Its course is always brief, like all counterfeit and spurious coin. The argus eyes of scientific experts soon fasten on it, and put it through the alembic of critical analysis, when its bogus character is clearly made known, and it no longer deceives any who wish to know and follow truth. But the world, in its still imperfect development, contains a large class of those characters whom Paul, in his inexorable theology, diagnosed and prognosed thus. Says he of them—"God gave them over to strong delusions, to believe a lie, that they might all be damned, because they knew not the truth (didn't want to know it, I suppose), but took pleasure in unrighteousness." This is pretty sharp criticism from a man who was founding a new dispensation. We, in the pity of our hearts, would prefer to be in sympathy with "Auld Scotia's favorite bard," in his "Apostrophe to the De'el," when he said "O wad ye tak a' thocht an mend." Our profession is eminently scientific. Superstition is eminently unscientific; therefore there is an irreconcilable antagonism. This irreconcilable antagonism inevitably leads to an "irrepressible conflict." The hosts of empiricism, or unscientific medicine, are always ranged under the somber, gloomy folds of the banner of "the Giant," who, in "The Tale," represents Superstition. His power was always greatest when the light was weakest. So the course of empiricism is always flourishing in exact ratio with the ignorance or superstitious credulity of the community. Our calling seems destined to encounter, fight, conquer, and finally explode every form and phase of medical falsehood. This is in accord with a universal law in development which seems to require that every conceivable form of error and wrong, from want of conformity through ignorance, or departure through viciousness, should be demonstrated, that in the end mankind may intelligently and wisely choose and follow truth as the enduring good— the only safe, certain way to true, enduring happiness and prosperity. In conclusion, Mr. President and gentlemen, oppressed with a vivid sense of the magnitude and importance of my theme, I feel constrained to apologize to you for the very inadequate, hasty, and imperfect manner in which it has been presented for your consideration. I did at first intend to pass in review the entire Code, by article and section, but the more I reflected, the more it grew upon me, until I saw that a book would be required to contain all that might be, or perhaps ought to be said. So, in the brief space of a paper before you, I thought the presentation of the more general features might be more acceptable. With your kind permission I desire to state a few of the points I wished to take:

1. Our profession is the highest and holiest of any on earth.

2. That it brings us constantly into connection with the laws and vital forces of the universe.

3. That man is the highest product of those laws and forces.

4. That our profession includes for its field man in his entirety.

5. That it is necessarily required to investigate and understand every cause that operates favorably or unfavorably on man.

6. That in order to successfully perform the responsible duties involved, the highest scientific education attainable is imperatively required.

7. That as we are daily made the repositories of confidence in the most delicate and sacred of human relations, our profession is bound to a higher and more perfect standard of manly character than is required of any other profession.

8. That as our sphere is man in his entire nature, and we are thus brought necessarily into intimate connection and knowledge of the laws of his being, our profession is inevitably destined to take precedence of all other professions, and lead in the van of the grand army of human progress.

9. That humanity is perfect, and beautiful, and valuable, just in proportion to its absolute conformity to universal law in the conception, growth, and development of the human being.

10. That it is the mission of our profession to develope the knowledge of all the laws of man's organization, and teach them to all mankind.

11. That, under this teaching, the tide of humanity will rise higher and higher in the scale, until a nobler, more intellectual, a purer, better race, more efficient for all beneficent enterprise, will be developed on and dominate the earth, than has ever yet peopled and governed it.

THROMBALLOSIS.

BY GEO. N. MONETTE, M.D.

The phenomena typical of thromballosis (and embolism), in contradistinction to apoplexy, coincident with rupture of a cerebral vessel, are of a more pronounced and complicated character than those of apoplexy.

Although apoplexy, in the aged, may be more rapidly fatal, yet an embolism may complicate with diversified phenomena, and the patient may linger for a long time.

The differentiating feature being that in embolic cases the pressure upon brain tissue is from within outwards, but circumscribed by the limits of the dilated vessel, and not diffused over the adjacent tissue, similar to *extra-vascular*, as occurs when rupture of vessel takes place, thereby causing extensive circumjacent pressure and obliteration of cerebral function; often profound coma, or *bona-fide* apoplexy is caused.

We know that the predisposing cause of apoplexy is an atheromatous degeneration of the internal coat of arteries, *vice-versa*, in thromballosis the pathology is induced by an endarteritis or phlebitis, yet the inflammatory phenomena are really not acute enough to attract serious attention in some cases.

Very recently, several cases of thrombus and embolism have come under my observation and treatment, as I was able to interpret the symptoms.

Case. I. Will S., aged 23 years, a wild and dissipated character. Had had syphilis, but was treated some time prior to my attendance upon him. I found him with an acute diarrhœa, induced by drastics. Associated with this were aphonia and unilateral paresis, which yielded gradually to quietude and alkaline treatment (pot. iod.) Motive coördination was almost wholly regained after a fortnight. When acute unilateral facial paralysis and contraction developed, I added strychnine to the compound, with success.

In connection with the treatment of this series of cases, I must not overlook the inestimable advantages derived from the internal administration of ergotine. So, in the foregoing case No. 1, I ascribed much of the benefit acquired to the joint efficacy of ergotine.

Some weeks subsequent to the manifestation of the unilateral facial paresis and its relief, the young man developed violently insane and murderous features; intensely irascible and as suddenly humiliated, and ultimately morose and subdued. These paroxysms of insane violence (sometimes alternated by fits of immoderate laughter, conveying an hysterical nature) continued up to his demise, which was resultant upon an attack culminating in apoplexy. No post-mortem could be obtained. He survived his incipient malady about six months. Syphilis may have been a potential factor in the predisposition of such a lesion, superinduced by hypercatharsis. I have observed numerous developments of a similar nature with no specific taint.

Case II. Mrs. ——, aged about 31 years, mother of several children (all healthy); of prior good health. Catamenia regular; devoid of uterine disorders. She was addicted to the use of patent cathartics, and was suffering from the violent effects of the same when I was called.

I found her with an unilateral transient paresis, with loss of motion. Modified sensation. No perceptible diminution of surface heat or of temperature, save of podalic extremities. There was some contraction of the facial muscles, also an irrepressible disposition to alternately immoderate paroxysms of laughter and grief, resembling hysteria. In view of the pathology of the case, as I appreciated it, I adopted the *nihil* treatment for several days when, I ordered the following:

℞. Potassii iodidi.....3ij.
Liquoris potassi arsenitis...3ij.
Ext. ergotæ fluid.....
Tinct. Gentianæ āā..... ℥i.

Sig. Teaspoonful every 4 hours.

which was continued for several weeks, when she recovered sufficient strength to walk about with the support of chairs, railing, etc.

Her general health continued good for about a year, when I was called again. I observed a recurrence of the identical hysterical phenomena, with exaggerated sensations and some tingling in the affected side (left), which alarmed her. I ordered an enema of chloral (ʒss) potassii brom. (ʒj) for the night. Upon my next visit I renewed the prescription for her former illness, which proved beneficial as formerly.

Case III. A gentleman was aroused during the night and found his wife in convulsions. I was called,

and saw her still comatose, yet emerging somewhat from the seizure, with an occasional respiratory stertor, and as often relapsing into an apparent respiratory indolence. I saw no hope for her recovery. She died within four hours. She was *enciente* (about three months). Her husband related that she used cathartics immoderately, with the consequent perversion of her assimilative energies.

I ascribe the phenomena of these cases to *hypercatharsis*, provoking malassimilation, anæmia, hydræmia, ultimating diversely in each case as above reported.

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MEDICAL PROGRESS.

MATERIA MEDICA AND THERAPEUTICS.

The Surgical Uses of Subcarbonate of Iron.—Dr. N. Timmermans (*Journal de Medicine, Bruxelles*) recommends the use of this agent in the treatment of constitutional and local ulcers, recent or suppurating wounds, and in erysipelas. He uses it in ulcers, by first washing the ulcer thoroughly with warm water, by lotions or irrigations, dries the surface with fine linen or charpie, and then covers the surface and borders of the ulcer with a layer (1 to 3 millimeters) of the powdered subcarbonate of iron, holding it in place by charpie, a compress and a bandage. The first few days it is renewed three and four times a day. If there is an abundant secretion, it mingles with the powder and forms a crust, under which the pus forms, and nullifies the action of the drug.

After several days of application, the ulcer, which had been pale, grayish, with a few vascular granulations or none at all, and furnishing a sanious, ichorous, fetid pus, in greater or less quantity, becomes changed in appearance; healthy pus shows itself, the borders which before were puffed out have now flattened out, and the base is filled with small, red, vascular granulations. A slight pellicle, like a delicate bluish line, appears along the borders, and invades by degrees, and by successive concentric zones, the whole of the loss of substance.

This application is ordinarily painless. But when the ulcer is the seat of a certain inflammation, the pain caused by its use becomes intolerable, and the inflammation must be subdued by the ordinary means before proceeding to its use. Sometimes this pain is due to impurities in the drug, such as sulphate of iron, and the sulphate and carbonate of soda. Varicose ulcers are the most painful on the application of this preparation, and the callous ulcers give the best results from its use, a cure being generally completed in from twenty-five to thirty days. The fungous ulcer also yields readily to treatment. The only cases in which there is absolute want of success, is in those where the ulceration of the subjacent derm is so advanced (scleroderma deuteropathic) that the conditions of the circulation have changed.

The powdered salt of iron, so applied, absorbs the pus, and exercises a certain degree of constringing power, which moderates or arrests the secretion. It is an excitant, acting like a foreign body; it modifies the atonic surface, stimulates and revives its vitality. But its prime force lies in its capacity for establishing an electrical current, and thus stimulating the ulcer.

On Bromide of Cadmium.—Dr. Roux (*de Brignoles*) has attempted to give bromide of cadmium for an antispasmodic in two cases of epilepsy. He records (*Marseille Medical*) the result as producing immediate and abundant vomiting. He used bromide of cadmium 5 grammes, distilled water 300 grammes; a tablespoonful as a dose. He naively says that he desired to try the medicine on himself, and took, as a prudent man, only a half of a coffeespoonful, when it produced as much upon him as if he had taken a grain of tartar emetic, which salt always has a very energetic effect upon him. His second case was that of a young girl, and he modified his prescription so far as to add bromide of sodium 5 grammes to the mixture, but the result was the same. In this case, however, there was no return of the epileptic attacks for six months.

Dr. Roux is content to class this drug simply as a very energetic emetic.

On Resorcin in the Treatment of Pertussis.—Dr. Moncorvo, of Rio de Janeiro, concludes an interesting article on this subject as follows:

1. Pertussis, the nature of which has been for so long a question for various interpretations, as regards its genesis, seems to-day to be ranked among the parasitic diseases, according to the latest clinical observations and microscopical researches.

2. The disease appears to be attributed to the presence of micrococci, which proliferate in great numbers on the mucous membrane of the supra-glottidian region of the tongue, by infiltrating the epithelial cells, which seem to be the seat of selection for their proliferation.

3. The resorcin applied directly upon the laryngeal mucous membrane, is successful in every case in which it has been employed in diminishing quite rapidly the number of paroxysms of coughing, which also lose their intensity, causing, in fact, after a short time a cure independent of all other medicinal agents.

Dr. Moncorvo employs concurrently the classic treatment of catarrh, when it is necessary, as ipecac, for example. But the painting with resorcin constitutes his true curative treatment. This is applied every two hours to the orifice of the glottis by means of a brush with a long handle.

The following is the formula used:

Resorcin, chemically pure.. 1 gramme.
Distilled water.....100 grammes.

From the numerous observations recorded by Dr. Moncorvo, it appears that the paroxysms of coughing diminish rapidly, and cease entirely in from twenty days to a month.—*Moniteur Therapeutique, Marseille Medical.*

The Hypodermic Use of Kairine.—Dr. Queirolo (*Gazzi degli Ospitali; Bull. Gen. de Therap.*) finds that kairine, used hypodermically, produces a more rapid, enduring, and greater lowering of the temperature than when taken internally.

To obtain this result the kairine is not required in as large or as frequent doses as when taken internally.

The hypodermic administration is exempt from any general inconvenience or local disturbance.

On the Treatment of Syphilis by Thallium.—Dr. Rabuteau having published in his last, fourth edition (1884) of his *Traité elémentaire de therapeutique et de pharmacotogie*, some references which were favorable to the use of this new drug in syphilis; as he used it in the form of an iodide and in one fifth the dose of mercurial iodides, Drs. Pozzi and Courtade, of the Hopital de Loureine, who were associated with Rabuteau in attemping to utilize the drug, give their views, based upon eight cases, as follows (*Gazette Medicale de Paris*):

1. Iodide of thallium is an alterative.

2. It has produced a certain degree of amelioration in syphilitic affections, but this relief might also, with propriety, be attributed to proper attention to hygiene, etc.

3. It becomes absorbed into the system, as is shown by the alteration of the gums, and its presence in the urine.

4. Mercury remains in the first rank in the treatment of syphilis, and thallium takes its place far behind it, even if the relief afforded can be attributed to it.

Etherization by the Rectum.—M. Daniel Molliere (*Lyon Medical*) relates that for the idea of using ether in this way, he is indebted to Dr. Axel Tversen, of Copenhagen, who, upon being shown around the Hotel Dieu by him, asked what anæsthetic was preferred, and whether it was used by the mouth, or by the rectum. Struck with the remark, and its explanation the next day, M. Molliere applied ether by the rectum with the aid of a double-tubed flaçon and Richardson's atomizer in the case of a girl of twenty years of age, to assist in the removal of a tumor in the parotid region. Ten minutes passed before she showed any signs of absorption of the drug. Then she said that she tasted the ether very decidedly, and her breath gave a marked ether odor. She began to hesitate in her speech, and a few drops of ether being applied to the nose, she fell into a profound sleep. The quantity of ether absorbed was insignificant. The patient having taken a plate of soup before its use, vomited in consequence, on her awakening, but there was no fatigue or nausea following.

A second case was that of a woman, forty years of age, etherized for the removal of a tumor filling the antrum of Highmore. A rubber tube of the size of the finger was introduced into the rectum and connected with a vessel of ether, which was placed in another vessel filled with water at about the temperature of 122° F. The ether entered in ebullition, and in about five minutes the patient came under its effects, with a marked ether odor from her mouth. A few grammes of ether on a sponge, applied to the face, produced complete anæsthesia. There were no bad effects on awakening, no nausea or vomiting; only a slight excitation common with ordinary anæsthesia.

The third case was that of a robust girl of nineteen years, who suffered from a necrosed phalanx which had to be removed. She, lying upon her side, talked freely and pleasantly while the ether was bubbling up in her rectum. Presently she stopped talking, closed her eyes, and slept peaceably, and the operation was performed. The ear applied to the abdomen heard the crepitus of the bubbles of ether. The nostrils exhaled an odor of ether. The awakening was perfectly natural. The quantity used was about ten grammes.

The fourth case was a robust man, to be treated by stretching the sciatic nerve. He had been a soldier for twenty-five years, and was in the habit of drinking his quart of white brandy daily. His anæsthesia was complete, without any period of excitation, which is remarkable in an alcoholic subject.

Two other similar cases are recorded, and M. Molliere considers that this mode of administering ether is destined to be of great service, in suppressing the period of excitation, in allowing of an exactitude of dosage, in reducing the quantity to its minimum, and in giving great freedom to the surgeon in operations upon the face.

OBSTETRICS AND GYNÆCOLOGY.

On the Use of Sulphate of Copper in Obstetrics.—Dr. A. Charpentier, in a communication to the Paris Academy of Medicine (*Archives de Tocologie*), refers to the comparative value of certain medicinal agents in the antiseptic treatment of confinement, such as carbolic acid, bichloride of mercury, salicylic acid, permanganate of potash, chloral, etc., etc. The object to be attained is to find an agent that will fulfil certain conditions, such as:

A decided antiseptic, of ready preparation, not causing any risk to the woman, any danger of intoxication when administered for a prolonged period of time; its management easy and inoffensive to the patient, physician, or attendants; not injuring linen, cloths, napkins, etc.; if possible, inodorous; and, finally, of a moderate cost.

Of these substances, carbolic acid is no longer used by the French obstetricians. The sublimate is the agent most used to-day in the lying-in hospitals. This latter agent has decided advantages over carbolic acid; it is without odor, and its antiseptic action is much more energetic, but it has its inconveniences and dangers. Carbolic acid, to be really of use as an antiseptic, must be given in strong solution, and in addition to the disagreeable odor, which is offensive, it may be also dangerous. All obstetricians have noticed, after seven or eight days of continued use of solutions of carbolic acid, erythemas,

and vulvar and vaginal lesions, which render them painful to patients; but we have the further testimony of a number of surgeons to show that the absorption of carbolic acid may produce symptoms so serious as to endanger the lives of patients.

Corrosive sublimate is naturally preferred to carbolic acid from its want of odor and its ready solubility in alcohol and chlorhydrate of ammonia. But it has also its objections; it irritates the skin, which becomes as hard as if tanned, and it is frequently badly tolerated by patients in whom it produces pain, erythemas, and very marked eruptions upon the genitals. Eight cases are referred to, in one of which it was thought that erysipelas of the arm existed, another case was affected with gingivitis, and in another, a case of Stadfeldt's, the death of the patient was attributed to an intra-uterine injection of a solution of sublimate, 1 to 1,500.

Sulphate of copper, Dr. Charpentier tells us, he was induced to try, after learning of the laboratory experiments with that agent by Pasteur. The solution used was a 1 per cent. heated to a temperature of 96.8° to 100.4°, applied as follows:

1. During pregnancy, all the women in the waiting wards who presented any symptoms of leucorrhœa, however slight, received each day one or two vaginal injections. Not one of the children born of these women showed any signs of ophthalmia. Every student who examined or handled these women, first washed his hands in the solution.

2. During labor, every student or midwife called to direct the labor was required, after a careful washing of the hands with soap and use of the nail brush, to wash the hands with the copper solution before making an examination. So long as the labor lasted, the woman was submitted, every two or three hours, to a vaginal irrigation with the copper solution. This was the morely strongly insisted upon in cases of premature rupture of the membranes, of dead and macerated fœti, malpresentations, etc. All manual or instrumental interference was always preceded by a copper vaginal injection, and a washing of the hands and instruments with the same.

3. During delivery. If the delivery was natural, it was followed by a single vaginal injection, and left to the ordinary treatment. In four cases of incomplete abortion where the membranes were retained, and septicæmia was threatened, the copper solution was used in vaginal and intra-uterine injections, with the result in each case of a complete, rapid and radical cure. In three of these cases the temperature descended in twenty-four hours, from 104° to normal, and the pulse returned to its normal frequency after three injections. In one case it required five intra-uterine injections to produce the expulsion of the contents of the uterus. Once the first injection produced suddenly uterine contractions and a marked hæmorrhage. Again, the fourth injection was followed immediately by a nervous attack with almost complete loss of consciousness, paralysis of the tongue, and contraction of the limbs, but this could not be attributed to the sulphate of copper alone, for the same symptoms occurred in another patient, some time previously, after the use of a solution of the sublimate. In the cases of delivery at term, each patient receives afterwards a vaginal injection, which is replaced by a uterine injection in those who have undergone any manual or instrumental operation, where labor has been prolonged, who have been delivered of dead or macerated fœti, where the amniotic fluid is colored by the meconium, and in cases of malpresentation. In one case where free hæmorrhage occurred after delivery, one vaginal injection, followed in a few moments by a tampon of wadding soaked in the solution, stopped the flow. Another case of hæmorrhage which had resisted the use of ergot and hot water injections, was checked instantly by a cold uterine injection.

4. During the confinement which follows delivery. Here, if everything is regular, the application is restricted to washing the vulva at least four times in twenty-four hours, and the application of a compress wet with the solution to the genital organs. If there occur, however, the slightest signs of infection, chilliness, elevation of pulse, of temperature, tendency of the lochiæ to become fetid, or sensitiveness of the abdomen, the vaginal injections are used; if at the end of several hours no relief is afforded, intra-uterine injections are used.

This vigorous application of antiseptic treatment followed 12 deaths out of 397 labors within six months, which were attributed to septicæmia; for a month afterwards, under the use of carbolic acid, the mortality was suppressed, but slight phlebitis, phlegmasia alba dolens, and ophthalmias in the newly born, showed the existence of a morbific influence; then three women died, one after the other, within a space of five days. The sulphate of copper treatment, as detailed, was then established, and kept up for three months in 212 labors, with no deaths and no complications worthy of note. Whether used as a vaginal or intra-uterine injection, the solution of sulphate of copper never produced any pain, immediate or consecutive, even when there existed vulval or vaginal erosions. In one case, through a mistake of a pharmacist, a ten per cent. solution was employed without any discomfort. Dr. Charpentier sums up his conclusions with regard to it as follows:

1. Sulphate of copper in 1 per cent. solution, is an antiseptic of the first order.

2. It combines astringent and coagulating properties, and may yet be substituted as a hemostatic for the perchloride of iron, over which it has the advantage of not soiling the linen.

3. Its use may be continued through the first eight or ten days following delivery, repeated frequently during the twenty-four hours, without other effect than a rapid amelioration.

4. Surgeons especially should test this antiseptic, which, in a number of cases, particularly in one of voluminous thrombus of the vulva, assisted in a rapid cure without the discharge of any pus. In one case of fetid abscess of the urethro-vaginal track, it suppressed in twenty-four hours all the fetidity and general symptoms of putrid infection, which carbolic acid solutions had failed to do.

SURGERY.

FIBRO-PLASTIC CANCER OF THE PENIS.—Dr. J. Lopez Alonas (Correo. *Medico Castellano*, Madrid) reports this case as occurring in a priest, 58 years of age, of a sanguine temperament, excellent habits of life, and with no hereditary antecedents. For about six years, the tumor, of the size of a grain of corn in the beginning, developed by degrees until the penis disappeared almost entirely, showing in its stead a rounded tumor of the form and dimensions of a cauliflower, formed by little soft lobules, adherent to the deeper parts of the organ, and separated from each other by a soft substance. The penis served as a peduncle to the tumor, which presented deep ulcerations at various points, with indurated edges that bled freely and discharged an abundant quantity of a thick, grayish, purulent fluid of a fetid odor. The meatus urinarius was found at the inferior portion of the neoplasm, and the urethra was not ulcerated. The amputation of the penis at its root was effected by the linear constrictor—the urethra being protected by a rubber sound—to prevent its narrowing during cicatrization, which took place within ten days after the operation without any serious drawbacks. The detached tumor weighed 972 grammes.—*Revue Medicale.*

A CASE OF NECKLACE SWALLOWING.—Dr. Dujardin (*Journal des Sciences Medicales de Lille*) records the case of a child seven years of age which swallowed a necklace of steel beads, weighing about 17 grammes. The interesting part of the case consisted in the perfect detection of the location of the necklace by the use of the induction balance. After placing one of the two groups of bobbins at different parts of the abdomen, the telephone responded only over the region of the stomach. The response was very feeble in the neighborhood of the umbilicus, but attained its maximum of intensity at the left hypochondriac region, over the great pouch of the stomach. There seem to have been no bad effects from the accident. For several days the stools were very black, but they soon resumed their normal color, due probably to the fact that the beads were covered by a layer of mucus which prevented their direct contact with the gastric juices and alimentary substances.

MEDICINE.

HEAT AS AN ANÆSTHETIC IN BURNS.—Dr. Silverio Dominguez (*Anales del Circulo Medico Argentino*) finds that when small superficial burns, such as often occur upon the fingers, are approached as closely as possible by the body which has produced the burn, or by a lighted match, which is kept there for a time, the pain ceases. The pain increases very much for a moment, and then ceases entirely. In these burns there is an instantaneous elevation of temperature, which is not sufficient to produce a disorganization, as it hardly produces an effacing of the wrinkles of the epidermis, but it increases the sensibility to the amount of positive pain by the irritation of the peripheral nerve extremities. Under these circumstances, the close approach of a heated body increases the pain greatly for the first few moments, and then, having arrived at its maximum, the pain disappears, and nothing remains but a sensation analogous to that of a foreign body, which is probably due to the slight modification undergone by the cutaneous surface.

The sensations of contact, and of pressure, are placed on a scale better graded than the thermic sensations. By increasing contact, pressure is produced which, to a degree, produces pain, in consequence of an alteration or disorganization of the nervous extremities; this pain disappears on the increase of the pressure. Undoubtedly, a very low temperature would produce the same effect, but it is not so readily applied. We may say, then, that the pain of a burn may be made to disappear by the application of heat or cold, and that the pain from a similar lesion produced by low temperature may be made to disappear in the same way.—(*Revue Medicale.*)

A READY MEANS OF DETECTING ALBUMEN IN THE URINE.—M. Hoffmann (*Semaine Medicale*) has strips of paper prepared for this purpose, by dipping them into a mixture consisting of a solution of corrosive sublimate 1 to 20 parts of water, and iodide of potassium 1 to 2 parts of water, in equal quantity. When dried, the paper can be carried to the bedside, and dropped into the specimen of urine, and if albumen be present a precipitate will immediately follow. To produce this reaction the urine must be acid, and to make sure of this, a strip of paper which has been soaked in a solution of citric acid is first placed in the urine.

ON THE TRANSMISSION OF TUBERCULOSIS BY MILK.—Either the recent experiments made by the inoculation of various substances in connection with the germ theory of disease, are making wonderful and rapid strides in advance in medicine, or many of us are being greatly deceived. M. H. Martin (*Jour. de Med. et de Chir.*) thinks he has demonstrated by a series of inoculations of milk in guinea-pigs, that the milk ordinarily consumed in Paris is susceptible of communicating tuberculosis. Out of nine inoculations, three were positive in this result, and he advises that milk be always boiled before using. But he considers that when taken into the alimentary canal, a lesion is necessary to admit the entrance of the morbid germ.

LUSK says: "The indiscriminate use of intra-uterine injections has been followed by an increased mortality invariably." He refers to their use in the puerperal state.—*Detroit Lancet.*

IT is stated that among the Piute Indians a doctor who loses three patients, one after another, is shot by the tribe. There is some encouragement for medical men there to exercise all their skill.—*Detroit Lancet.*

THE

Journal of American Medical Association.

PUBLISHED WEEKLY.

THE EDITOR of this JOURNAL would be glad to receive any items of general interest in regard to local events, or matters that it is desirable to call to the attention of the profession. Letters written for publication or containing items of information, should be accompanied by the writer's full name and address, although not necessarily to be published. All communications in regard to editorial work should be addressed to the Editor.

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SATURDAY, MAY 17, 1884.

GROSS, SAMUEL D., M.D., LL.D., of Philadelphia, was born near Easton, Northampton Co., Pa., July 8, 1805; died at his residence in Philadelphia, May 6, 1884. His literary and classical education was obtained at the Wilkesbarre Academy, and the high school, Lawrenceville, N. J. Having selected medicine as the pursuit of his life, he began the study of it in his native place with Dr. Joseph K. Swift, and subsequently for some two years he was a student in the office of Prof. George McClellan. After attending the usual course of lectures in the Jefferson Medical College, he received the degree of M.D. in 1828. Dr. Gross began practice in Philadelphia; he was fond of study, industrious, and stable in his purposes, and being resolved to succeed in his profession, occupied his spare time in extending his medical researches and in editing or translating medical papers and works from the French and German. He published in 1838 a work on "General Anatomy," and "Operative Surgery," in 1829; in 1830 "Anatomy, Physiology, and Diseases of the Bones and Joints," in which adhesive plaster is recommended in making extensions; shortly after, a small work on obstetrics, and a work of much value, based on experiments and original observations, "On Wounds of the Intestines." Work on "Elements of Pathological Anatomy," which was the first work of the kind in the English language. A paper on Foreign Bodies in the Air Passages was published as early as 1850. Dr. Gross early established a reputation for close and accurate observation with a comprehensive knowledge of anatomy and pathology.

In 1833, he was invited to become Demonstrator of Anatomy in the "Medical College of Ohio," at Cincinnati. After filling the position for two years, he was elected to the chair of Pathological Anatomy in the "Cincinnati Medical College." He delivered the first course on "Morbid Anatomy" ever delivered in this country. After a residence of four years in Cincinnati he removed to Louisville, Ky., where he resided and practiced his profession with increasing reputation. He had been elected to the chair of Surgery in the "University of Louisville." Here was the theater in which his great powers were brought prominently before the profession and gained a wide and appreciative recognition. In 1850, on the retirement of Valentine Mott from the chair of Surgery in the Medical Department of the University of New York, Dr. Gross was elected to the position. He delivered one course of lectures, but at the solicitation of his former colleagues, he returned to his previous position in Louisville. In 1856, when the failing health of Prof. Muter induced him to retire from the chair of Surgery in the Jefferson Medical College, Prof. Gross was elected to the position, and he returned to his native State. For one-quarter of a century he filled the position in the most satisfactory manner and with increasing reputation, and the advancement of the popularity of the college. Admonished by increasing years, in 1882 he retired from the chair of Surgery with the best wishes of the Trustees and Faculty, and had the satisfaction of seeing his son inducted to the position. Although a pleasing lecturer, and an excellent teacher, which accurate knowledge and a good address enabled him to use with effect and rare ability before a class, and in the operating room, still it is probable that his fame will rest largely upon his high moral character and his operative skill and literary labors, rather than upon that of a teacher. It is probable that his system of surgery, which he has revised and enlarged, is to-day the work of the highest authority on surgery in this country. Prof. Gross has received the highest honorary testimonials and honors from foreign universities, from Oxford, from Cambridge, and from the University of Edinburgh, in Scotland, and from other foreign societies and institutions of learning. He has also been equally honored by the scientific, literary and medical institutions throughout the United States. In 1867 he was elected President of the American Medical Association; in 1870, President of the Pennsylvania State Medical Association; and in 1876 he was elected President of the International Medical Congress, which met in Philadelphia that year. Prof. Gross was largely influential in founding

the Pathological Society of Philadelphia, the Philadelphia Academy of Surgery, and the American Surgical Association. He was a member of the Philadelphia College of Physicians and the Philadelphia County Medical Society. It would fill pages to enumerate all the societies to which he belonged. He was a warm supporter of medical organizations, and attended meetings of the American Medical Association in 1858, 1866, 1867, 1868, 1870, 1872, 1874, 1875, 1876, 1877, 1878, 1879, 1880, 1881 and 1883.

Prof. Gross was popular with the profession, and widely known throughout the United States and Europe. Scarcely a foreign medical man of note visiting America but paid his respects or brought letters of introduction to Dr. Gross. He was hospitable in the highest degree, social and entertaining. At his table and in his parlors were to be met on almost any day the notables in social and professional life. He retained to the last his relish for society and his power of literary work. Within a day or two of his death a paper of his, "On Wounds of the Intestines," was read in the American Surgical Association by his pupil and friend, Prof. Richardson; and another, after his death, before a Section of the American Medical Association, by Prof. Theophilus Parvin. An autopsy was made, in obedience to an oft-repeated injunction to his children, that the cause of death might be obtained beyond a question. He also left a request that his remains should be cremated, which injunction was respected, and the incineration accomplished at the Lemoyne furnace, in Washington county, Pennsylvania, on the 8th of May, 1884. Funeral services were held at his residence before the remains were sent to the crematory. The ashes of Prof. Gross were taken to Woodland Cemetery, and laid by the side of the remains of his wife. Dr. Gross leaves four children, two sons and two daughters. His sons, S. W. Gross, M.D., and A. Haller Gross, Esq., of the Philadelphia bar. His daughters are married, one to Dr. P. J. Horwitz, ex-Surgeon-General of the United States Navy; the other to Benjamin Horwitz, Esq., of Baltimore. As the duty of preparing a proper memoir of Prof. Gross has been referred to a committee by the American Medical Association, this hasty sketch is presented for immediate use, to answer the expectations of the readers of the JOURNAL. J. M. T.

THE THIRTY-FIFTH ANNIVERSARY MEETING OF THE AMERICAN MEDICAL ASSOCIATION.—This truly representative organization of the medical profession in our country, closed one of its most successful and enthusiastic annual meetings in Washington about 1 P. M., on Friday, May 9, 1884. It was successful in the unusually large number in attendance, there being more than 1,200 regularly registered members present, including representatives from nearly all the States and Territories of the Union. It was eminently successful in the amount and quality of work done. Through the active interest of the President of the Association, the repeated notices and explanations in the JOURNAL, the officers of most of the Sections had been induced to act more directly in concert with the Chairman of the Committee of Arrangements in securing an ample supply of good papers for each Section, with more systematic and interesting provisions for discussion, than at any previous meeting. If there was any exception to this remark, it was the Section of State Medicine, which appeared to have very few papers on its programme. The principal defect in the general preparation of the programme, was in not completing it in time to have it published in the JOURNAL, at least two or three weeks before the time of meeting. The By-law of the Association requires that the Chairman of the Committee of Arrangements shall be notified of the title and general contents of all papers intended for presentation in any of the Sections on or before the first day of April of each year, for the express purpose of enabling him to have the programme ready for publication sufficiently in advance of the meeting, that members may be prepared to consider and discuss intelligently the papers presented in every Section. Through the prompt and persevering activity of the Chairman of the Section on Practical Medicine and Materia Medica, the programme for that Section was completed and published in the JOURNAL three weeks before the meeting, giving not only an attractive list of papers, but the names of eminent men who would lead in the discussion of those deemed most important.

The result was, that the attendance upon this Section was full, and the most lively interest maintained in every session from the beginning to the end; while the other Sections, whose programmes were completed only in time for distribution at the opening of the meeting, had a much smaller attendance. The Chairman of the Committee of Arrangements used every legitimate means to induce those intending to present papers to send him notices of the same within the time specified in the By-law, but the dilatoriness of those who should be most interested in the matter, induced him to keep the programme open until the 24th of April, leaving only time to have it printed for distribution after members would be on their way to the meeting. The only cure for

this evil will be a rigid enforcement of the By-law requiring all who propose to present papers or reports, to forward them or their titles and contents to the Chairman of the Committee of Arrangements, at least *one month* before the time of the meeting of the Association. An active coöperation of the officers of the Sections will greatly aid in accomplishing this. The meeting just closed, was not only successful in the number of members in attendance, and the quantity and quality of the scientific and practical work done in the Sections, but equally so in the character of the general sessions of the Association. The Committee of Arrangements had performed its work with rare good judgment and ability; and the welcoming address of the Chairman, Dr. A. Y. P. Garnett, was eloquent in style, appropriate in matter, and judicious in length. The President, Dr. Austin Flint, so well known throughout the medical world as an eminent author and teacher, on taking the chair was received with enthusiastic demonstrations by the assembly, which closely filled both the large audience room of the church and the spacious galleries. As every one expected from his well-known ability, his address was admirable in its tone, appropriate in the selection of topics discussed, eloquent in its style, and dignified in the manner of its delivery. It was listened to with the most marked attention, and its recommendations promptly taken under consideration. The address in full, however, was given to our readers in the first issue of the JOURNAL after its delivery, (May 10), and speaks for itself. The allusion in the address to Prof. S. D. Gross was in perfect accord with the feelings of the audience, and when the dispatch came back from Philadelphia saying that the Nestor of American surgery had expired during the hour the address was being delivered, it caused a feeling of sadness to pervade every heart. The addresses of the chairmen of the several Sections so far as they were read, were characterized by a fair degree of ability; but their number and the length of some of them rendered it impracticable to have them all read in the time allotted to the general sessions of the Association, and allow time for the transaction of any other business of importance.

In consequence, three of these addresses were only read by title on the last day, and referred for publication. It is apparent that some change must be made in regard to these addresses in the future. Either the writers must be required to adhere strictly to the requirements of the By-laws, which would necessarily render them short, or their number must be reduced. But this topic, in connection with a proposed change in the mode of electing the officers of the Sections, will be referred to more at length hereafter.

The social entertainments were numerous and of the most attractive character. Besides several elegant private entertainments, the members of the Association, and those accompanying them, were cordially received on the first evening by the President of the United States in the Executive Mansion; on the second, an elegant banquet was tendered by the Medical Association of the D. C.; on the third, the Corcoran Art Gallery was illuminated and a reception given by W. W. Corcoran, Esq.; and on the fourth the members were very cordially received in the Capitol, which was illuminated for the occasion, by Senator Edmunds, President *pro tem.* of the Senate, and Mr. Carlisle, Speaker of the House, and at the Army Medical Museum by Surgeon-General Murray and his Staff. The place selected for the next meeting of the Association was New Orleans, and the time the last Tuesday in April, 1885. The full list of officers elected for the ensuing year may be found on the last page of the present number of the JOURNAL.

SOCIETY PROCEEDINGS.

PLASTIC SURGERY.

BY PROF. A. C. POST, NEW YORK.

At the regular meeting of the District Medical Society for the county of Hudson, at Jersey City, N. J., April 1, after the routine business had been disposed of, Prof. A. C. Post, of New York, delivered a very instructive and interesting lecture, illustrated by diagrams, paintings, drawings, and photos, showing the results in rhinoplastic, blepharoplastic, cheiloplastic and heteroplastic operations in *Plastic Surgery*. Prof. Post said: By this term is understood the branch of the healing art, which aims to supply deficiencies on the surface of the body, resulting from congenital malformation, from traumatism or from disease. The term plastic is derived from the Greek verb πλαστικος, —I form. Plastic operations consist in the detachment of flaps from neighboring or distant parts, and uniting them with the surface and edges of the vacant space which is required to be filled. The term anaplastic is sometimes employed, the prefix *a va* signifying up, and the term implying the forming or building up of the parts to their proper level. The term autoplastic conveys the idea that the transplanted parts are derived from the patient himself. The term heteroplastic signifies that the new tissue is derived from another person, or from an inferior animal. Blepharoplastic operations are those which are performed to repair defective eye-lids. Rhino-plastic operations are for defects of the nose. Cheilo-plastic,

for those of the lips. Prosoplastic, for those of the face in general.

In most of the operations for the repair of lost or defective features, the transplanted flap is left attached by some part of its circumference to the part with which it was naturally connected until it has acquired a vital union with the new parts to which it is artificially attached. The portion of the flap which retains its natural connection is called its neck or peduncle. There are three methods of transplanting pedunculated flaps, known as the Italian, the Indian, and the French methods. Plastic operations were performed by the ancient Egyptians, Greeks and Romans. In modern times Bianca performed a rhinoplastic operation in Sicily, in 1442. In 1597 Gaspar Tagliacossi, Professor at Bologna, published at Venice a book entitled "De Curtomm Chirurgia per Insitionem." In this book he gave a detailed account of his operation for the restoration of lost noses and other features. This book acquired a world-wide celebrity. The mode of operating consisted chiefly of the transplantation of flaps from the integuments of the arm, the hand being firmly bandaged to the head during the process of union. Fabulous accounts of his operations were published, representing the excision of flaps from a poor man nater, to supply the deficiency of a rich man's nose,a nd it was asserted that the vitality of the new nose depended on the life of the person from whom it was taken. A story is related of a nobleman whose nose was formed from the integuments of a Florentine peasant, and which retained its vitality for a number of years. Suddenly, without any obvious cause, the nose died and became a putrid mass. On inquiry, it was ascertained that the death of the nose coincided with that of the peasant from whom the material for its construction was obtained. Butler, in his Hudibras, alludes to such fabulous rumors, when he writes: "Thus learned Taliacotius from the brawny part of porteis bum cut supplemental noses, which would last as long as parent breech, but when the date of nock was out, off dropped the supplemental snout."

This mode of repairing defective parts by transplanting flaps from remote regions, is called the Italian or Taliacotian method. The mode of operating by transplanting flaps from adjacent parts, and twisting the peduncle so as to bring the flap into its proper position, is known as the Indian method, having long been practiced in Hindostan, and having been made known to European surgeons about the close of the eighteenth century. It had long been the custom of native tyrants of India to mutilate their rebellious subjects by cutting off their noses, and as "necessity is the mother of invention," the persons who were mutilated exercised their ingenuity in finding a remedy for the disfigurement resulting from the mutilation. The operation for this purpose was not performed by physicians, or surgeons, but by a class of artisans who were engaged in pottery. The Indian operation for the restoration of lost noses consisted in freshening the edges of the space from which the nose had been excised, and cutting a flap from the integument of the forehead, and twisting its peduncle so as to bring the flap into the position of the nose and fixing it so as to secure union with adjacent parts. The same principle is applicable to the restoration of other features besides the nose. The Indian operation of rhinoplasty was performed in London in 1803, but the first operation was unsuccessful. The first successful operation in Europe was performed in London in 1814, by Mr. Carpul. The operation has since been performed many times by surgeons in different parts of Europe and America. The resulting operation has been quite satisfactory, when enough of the original nose has remained to support the transplanted flap in its new position. But in cases in which the nose has been entirely destroyed, the new organ is an imperfect substitute for the old one, presenting a flattened or depressed appearance. But even in these cases, the new nose is a decided improvement on the cavernous depression which preceded its formation.

The French method of performing plastic operations consists in cutting flaps in the vicinity of the defective part, and gliding them into position without twisting the peduncle to any considerable extent. The Italian method of restoring lost features, by transplanting skin from remote parts, is now very seldom resorted to, except in those cases in which there is no available material in the immediate neighborhood. The Indian method is often employed, and yields very excellent results. In many cases, where the nose or the eyelid is the feature to be repaired, it is the only available method. The French method, by gliding the flap into its place, without twisting its peduncle, is the best operation in cases in which it is applicable, especially in supplying deficiencies of the lips and cheeks. The principal difficulty to be contended with is the tension of the flap when it is brought into its new position. This difficulty may, however, in most cases be obviated by giving a decided curve to the peduncle of the flap. In the performance of plastic operations, certain facts have been observed, to which it is proper to direct your attention. On making the first incisions the flap becomes pale, but afterwards the parts adjacent to the connecting medium assume a redder color. Dark bluish spots or streaks are often found scattered through the flap. Blood spouts at first from the arteries at the edges of the flap, and afterwards fibrine is effused. The flap contracts considerably, and is disposed to turn inwards; it also acquires an increase of thickness. These changes are most distinctly perceptible in young persons of healthy constitutions. The flap loses all sensibility, except at the extremity by which it is nourished, and even there the sensibility is but slight.

The flap should be one-fourth or one-third longer than the space which it is designed to fill, and a wide bridge should be left, connecting it with the adjacent part. The flap should contain not only the skin, but a considerable thickness of the subjacent parts, so as to afford a good vascular supply. It is highly important that it should be easily held in position, as any considerable tension will be likely to hinder its adhesion to the adjacent parts. In cutting the flap it is well to make a pattern of oil-silk, or other suit-

able material, of the size and shape of the space to be filled, and to use this pattern as a guide in making the flap. In fixing the transplanted flap in its new position, one or more pin sutures may be advantageously employed. These should include nearly or quite the whole thickness of the flap, and the points of entrance and the exit of the pins should be at least eight or ten millimeters from the edges of the wound. Numerous sutures of fine black silk should be employed to secure a perfect apposition of the edges of the wound. The spaces between the sutures should not exceed two or three millemeters. Black silk is preferable to white, as being less irritating and being more easily seen. The fineness of the silk is indicated by the letter O on the spools. In introducing the sutures, if the edges of the wound are of unequal thickness, the needle should be introduced more superficially on the thicker side. Before closing the wound, it may be freely irrigated with a solution of mercuric bichloride, eight grains to a pint. After applying the sutures, there is no occasion for applying bandages or plasters, but the surface may be freely exposed to the air. When the flap is congested, cold water dressings may be applied. On the ninth or tenth day all inflammatory swelling has generally subsided, and the cuticle cracks and peels off. When the flap has been taken from the hairy scalp, the hairs after a time will grow, and they may from time to time be plucked with forceps. The growth of hair may be diminished by the free application of lime-water, or a solution of mercuric bichloride, or the hair bulbs may be destroyed one by one by a galvano-cautery. In blepharo-plastic operations, when the eyebrow has been destroyed, it may be replaced by a flap from the hairy scalp, the hairs being allowed to grow over a space corresponding with the eyebrow, those above and below being plucked or destroyed. When I first restored the eyebrows in this way, I supposed that the practice was original with myself, but was afterwards informed that I had been anticipated by Dr. Pancoast, of Philadelphia.

To give proper shape to the newly formed feature it is often necessary to excise here and there small portions of the newly transplanted integuments. This may be done without hesitation, as wounds in recently transplanted integument heal by the first intention and with great rapidity, much more so than wounds in other parts. This observation was made by Dieffenbach, and I have often verified it in my own practice. When these wounds are allowed to granulate they bleed freely at first, and the blood is very bright and liquid. The wound appears pale, and the edges are scarcely inflamed; there is little or no suppuration, and the exuded blood forms a scale or scab, which after a while falls off, leaving the wound healed. When it becomes necessary to separate the edge of the flap from its new attachment, it never heals by the first intention, but always goes through a tedious process of granulation. Sensation is very slowly developed in transplanted parts. Many months, for example, elapse before a new nose transplanted from the forehead becomes sensible to pain. Sensibility is first restored near the line of union with the adjacent parts. The newly formed feature does not begin to perspire, nor to form thick pus when wounded, before twelve months. There is much difference in different cases in the power of withstanding cold possessed by the transplanted part. A patient, for whom Dieffenbach made a new nose, was attacked with jaundice eighteen months afterward. The whole body, with the exception of the nose, was of a deep yellow color. When the patient was warm the nose was white, when he was cold it was of a dark-bluish hue.

The treatment of cicatricial contractions is a matter of great importance. It is not safe to include cicatricial tissue in flaps which are to be transplanted, or to raise it to any considerable extent from the subjacent parts, as it almost invariably sloughs when it is so treated. But it may be freely divided, and a flap of healthy skin may be united with its divided margin with a good prospect of union by the first intention. It may be divided into narrow segments by incisions crossing each other at short intervals, and may then be put upon the stretch, and it will not slough if sub-based attachments be not interfered with.

Certain special modes of operating, which have been introduced by different surgeons, are worthy of attention.

Dieffenbach introduced an important improvement in treating the deformity occasioned by the loss of the nasal septum from syphilitic disease, and the sinking of the remnants of the nasal pyramid into the cavity. He made longitudinal incisions dividing the nasal pyramid into five strips, attached above and below, and raised them to their proper position, fixing them with pins and sutures.

T. Wharton Jones, in certain cases of ectropion, made a deep triangular flap, the base of which was formed by the margin of the everted lid, and bringing the margin of the lid into its normal position, caused the apex of the flap to recede widely from the part from which it was taken, converting the shape of the wound from the letter V to Y, and fixing the flap in its new position by sutures. This ingenious operation is applicable to other parts besides eyelids.

Burow, a German surgeon, introduced a new operation for certain deformities of the lips, in which there is a great deficiency in the lower lip and a relative superfluity in the upper lip, or *vice versa*. He took out a triangular portion from the diseased lip, the base of the triangle corresponding with the vermilion border, and extending on one side to the angle of the mouth, and extending the line of the base by an incision into the cheek, he excised another triangle, with its apex in the opposite direction, and uniting the opposite sides of the two triangles by sutures, restored the symmetry of the mouth, lengthening the shortened margin of one lip, and shortening the superfluous margin of the other.

In all cheilo-plastic operations, it is important that the margin of the newly-constructed lip should be invested with mucous membrane. When a flap has been transplanted from the cheek, the mucous membrane should be drawn over the margins and attached to the skin by fine sutures.

When there is no healthy mucous membrane for the purpose, the skin itself may sometimes be inverted over the margin.

Within the past fifteen years, a new mode of supplying deficiencies of integument upon the surface of the body has been introduced, viz.: transplanting thin portions of skin without peduncles upon recent wounds, or upon granulating surfaces, and maintaining them in position by plasters or bandages. The name skin-grafting, or epidermic grafting, has been applied to this process. It is somewhat analogous to the process of budding or grafting fruit trees. The practice was introduced by Reverdin, a French surgeon, in 1869. Reverdin was at that time interne in one of the French hospitals. He shaved off very thin portions of integuments of the size of a grain of rice, and applied their raw surfaces to the denuded or granulating surface of the part which he wished to invest with new skin. Close apposition was maintained for a number of days, and on removing the dressings, it was found that some of the grafts had acquired a vital union with the surface upon which they had been placed, and from each one of these points there was a radiated growth of new skin. This has now become an established practice in surgery, and it has become a valuable addition to our resources in cases in which there has been an extensive loss of skin. The practice has been modified by Lee, Ollier, and Poucet, who successfully transplanted larger portions of skin, in some cases larger than a silver dollar. In grafting portions of skin without peduncles, a very different course is to be pursued from that which is adopted in the transplantation of pedunculated flaps. Instead of including a considerable thickness of subcutaneous tissue, the part to be transplanted should be cut very thin, never including any subcutaneus tissue, and often including less than the whole thickness of the skin. This mode of grafting has the advantage that it can be applied where there is no available sound skin in the vicinity of the part which is to be restored, and that the new material may be obtained from parts of the body which are covered by clothing, so that the patient will not be disfigured by the cicatrices which follow the excision of the flaps. On the other hand, it has the disadvantage that it does not provide a flap of considerable thickness, such as is required for the restoration of the lips, where the skin must be lined with mucous membrane to perform its functions in a satisfactory manner.

The operation is a useful one under some circumstances, but it is not likely to supersede the transplantation of pedunculated flaps.

After Prof. Post's able discourse, the subject was thrown open to the Society for discussion.

Dr. Quimby remarked that the subject of plastic surgery belonged to that branch of the healing art which did not, as a rule, come under the notice or occupy the attention of the general practitioner. But it is a difficult, intricate, and important branch of surgery, and as we increase in population, and advance in civilization, it will, of necessity, become more important, and should engage the general attention of surgeons more in the future than it has in the past. Having paid some attention to plastic surgery, Dr. Quimby said he would like to make one or two observations:

1st. The reason, he thought, some surgeons failed in their plastic operations, was because there was not sufficient amount of care taken in relieving the affected parts operated upon from all tension. 2nd. He had witnessed one or two failures in these operations, because due regard, he thought, was not exercised in having the flap to be transplanted thick enough, and its peduncle large enough to preserve its vitality. When the flap is cut too thin, or the peduncle too small, and where there is too much tension, sloughing is sure to follow. A unanimous vote of thanks—of the Society—was tendered Prof. Post for his exceedingly instructive and valuable lecture, after which the Society adjourned.

J. A. EXTON,
Sec'y. Hudson Co. Dist. Med. Society.

CHICAGO MEDICAL SOCIETY.

Continuation of the proceedings *of the regular meeting*, April 21, 1884:

Dr. E. C. Dudley was to have read the report of a case of removal of a uterine myoma weighing 35 pounds. The patient was operated on five weeks since, and is gradually recovering. He promised to report the case to the society sometime during the next month. He would therefore report a case this evening in which he had operated to-day. The operation was for the removal of a cyst from the abdominal cavity. The specimen was presented for examination, and consisted of a polycystic tumor, of which the history is unique. The uterus and tumor were disconnected. Ten years ago the patient first noticed this tumor, when it suddenly disappeared. It developed again, and for years it has every three to six or sometimes eight weeks disappeared rapidly, followed, as the patient stated, by a very copious evacuation of urine; she would void a pint every half hour, amounting to a gallon or more in twelve or fifteen hours. It has ruptured repeatedly within the abdomen. Several gentlemen in the profession had been consulted by the lady before she called upon him. Such cases may very easily be confounded with hydronephrosis. There were in all fifteen or twenty cysts. The tumor was two-thirds as large as an adult head, and each cyst contained a yellow viscid fluid. The pedicle is small, and the operation of removal was easily effected. There are numerous cicatrices on the outside of the cyst walls, showing where rupture had occurred at different times, while on the inside there is developed a large colloid excrescence, which I here show you, although I have not examined it with the microscope. I am sure a histological examination would result in showing it to be an endogenous colloid growth. The development is not malignant.

In relation to its adhesions, no reliance could be placed on this, as there were no adhesions. In three hours after the operation the patient's pulse was 70, strong and full, and the temperature normal. The case shows that the fluid within the abdomen when

the sacs ruptured was innocent or non-irritant, and did not at any time induce peritonitis.

Dr. G. F. Lydston asked the author if he thought the colloid growth would be apt to return in another portion of the patient's system?

Dr. J. H. Etheridge asked if there were any communication between the cyst and bladder?

Dr. D. A. K. Steele reported a case of tumor occurring in a young woman, that disappeared spontaneously in a similar way as the one reported above. That it developed again, and he tapped it, when there was discharged clear ovarian fluid. He understood that it had filled again, and then disappeared the third time.

Dr. Dudley said the first question was an important and interesting one. He thought internal cancer, if thoroughly removed, is less liable to return than when removed elsewhere—by this he meant where the cancerous tissue develops within or internal to a cyst. If an ovarian tumor containing cancerous development is removed, neither will return as that of a cancerous breast is apt to do.

This case I have reported contains within the cystic wall colloid tissue. Had a cancer been without the wall, the history would have been quite different.

In answer to Dr. Etheridge, in none of the cysts was there any rupture communicating with the bladder. There was no solution of continuity or rupture or cicatrix of the bladder. Rupture of polycystic or monocystic tumors is not common, and this peculiarity occurring in the case which I have cited is the principal reason of my presenting it. When a cyst ruptures, the fluid is eliminated or absorbed, *i. e.*, the peritonæum will carry it off, and the fluid is not infectious in the least, as has often been demonstrated.

Dr. R. Tilley asked if the urine was examined microscopically? he was answered negatively.

Dr. Charles W. Purdy then read a practical paper, and demonstrated the reaction with the new urinary papers, for albumen and sugar in urine. These test papers were prepared by Parke, Davis & Co., and he thought were the most reliable of anything of the kind that had ever been presented. The following is an abstract of Dr. Purdy's paper:

After stating the very deep importance of additional light on the pathological condition of the urine, and the subject of urinalysis generally, the author proceeded to cite what is required from us by the leading life insurance companies in this direction, and furthermore, that the day is already dawning when no reputable surgeon can afford to employ the knife or chloroform without previous observation of the same precaution. The very ablest diagnosticians repeatedly overlook the presence of an interstitial nephritis, that may begin its march silently and stealthily, when the disease is yet within range of medication. The new method of investigation has practically revolutionized the old system of urine testing, and contains so many advantages over the old methods, that we are warranted in giving it more than a passing notice.

First, then, the four solutions—ferrocyanic, picric, iodo-mercuric, and tungstic, produce the most efficient tests in paper form. As all are very soluble salts, the papers can be heavily charged with each of these solutions.

Experience demonstrates that these tests possess the elements of rapidity, simplicity and accuracy to a degree not approached by the nitric acid or any method at present known, and the precipitates that any of these papers will produce, as Dr. Oliver observes, "in ninety-nine cases in one hundred are albuminous," and if *the one precaution alone of heating* afterwards is observed, the precipitate remaining *is positively albuminous.*

The mercuric iodide test first claims our attention as the most delicate of all, as an albumen precipitant. This test, in addition, is a most sensitive one for alkaloids, hence, if a patient is taking quinine, it will produce a haze in the urine, at first sight much resembling albumen, but the haze is a uniform turbidity in the case of the alkaloids when in the urine, *which does not break up into flocculi or settle to the bottom,* as in the case of albumen. Gentle heat will of course clear up this turbidity. The oleo-resin balsam copaibæ is not thrown down by mercuric iodide in the absence of an acid, but it precipitates peptones, if present in the urine, and is redissolved by heat.

Picric acid papers throw down alkaloids, also peptones, and occasionally urates, if present in the urine, the latter in excess. The picric, unlike the mercuric test, throws down oleo-resins, even in the absence of an acid, as a dense opacity; this dissolves on boiling, and reappears on cooling.

The tungstic papers differ from the picric and mercuric in the important particular that they will not cause precipitates with alkaloids, but, like the two latter, in the absence of an acid, they will not precipitate oleo-resins.

The ferrocyanic papers are likely to prove the most valuable of the series, being the least liable to error. So far as at present known, they throw down precipitates with no bodies usually met with in the urine save albumen and urates; the latter may be avoided by first diluting the urine with an equal bulk of water. This, then, is the only known test which will detect serum albumen in the urine positively without heat.

The citric papers accompanying these tests are destined to cover a wider range of utility than the mere previous rendering of the urine acid, and clearing up phosphatic turbidity. These test papers will also differentiate the forms of albumen in urine, whether it be serum albumen, or where it may be associated with an acid, or whether it may be associated with an alkali, (called alkali albumen). With such agents as the mercuric and tungstic tests, one part of albumen to twenty thousand (20,000) may be detected.

The mode of using the paper tests for albumen was then discussed, which evoked much interest from those present. Urine, if turbid, should not be submitted to any test if we expect to gain any accurate information. If the urine is not clear when voided, it should be filtered. If this does not clear it, a fourth of its bulk of liquor potassa may be added, then warmed and filtered. If still not perfectly clear, one or two drops of the magnesium fluid, (magnesia sulph.,

ammon. carb. āā parts i; aqua destillat, parts viii; liq. ammon. pur parts i), may be added, then warmed again and filtered. Then proceed with the suspected urine. Its reaction is first noted with litmus paper. Then the various procedures and steps are taken to ascertain whether albumen may be found with the above-named reagents.

In testing for sugar, all agents employed are either caustic alkalies, or bodies associated with an alkali. We may meet with a case of saccharine urine of exceptional acidity, rendering it necessary to add an extra paper of soda carbonate. Fehling's test becomes unreliable if kept too long, and all solutions used in sugar testing become unsuitable and unreliable. One of the tests for sugar is the copper test paper (made after the method of Trommer), and a soda carbonate paper; one of each are introduced into a test-tube containing 30 minims of urine, and heated to boiling. If sugar is present, the usual reaction will be observed.

Picric acid test papers possess the advantage that they may be used in testing for both sugar and albumen. Used with the soda carbonate paper, the picric, upon boiling with urine, assumes a dark color if sugar be present.

The indigo carmine test for sugar is the most striking and beautiful in reaction of any of these tests. When the indigo carmine is heated with soda carbonate and a solution of glucose or saccharine urine, the blue color is converted gradually into violet, then into various tints of red, and finally into yellow. This method is as follows: Place in a test-tube containing 30 minims of water a paper charged with the carmine of indigo, and one of the soda carbonate, heat till the indigo is discharged into the water, then add one or two drops of the suspected urine and apply heat. If sugar is present, the blue quickly changes to a violet tint. This in turn deepens, and passes into purple, which next shades into reddish purple, followed by various tints of red. These quickly merge into orange red and orange, and at last the solution becomes of a straw color, and the paper assumes a yellow color. The compass of this wonderful color reaction embraces all the prismatic colors save that of green, and their kaleidoscopic play before the eye of the observer in testing is one of most exquisite beauty.

It will be noted, on standing the tube aside, that these colors slowly return in the inverse order in which they appeared, especially in the upper part of the tube, which is due to reoxygenation through atmospheric contact. This may be hastened, as well as diffused through the whole tube, by constant agitation, or entirely stopped by filtering and corking the tube at any color. The tint reached in any particular case depends upon the quantity of glucose present in the urine. It may stop at any of the colors reached, but made to proceed to yellow by adding more glucose to the solution, *and upon this fact depends the working of the* QUANTITATIVE *tests for sugar in paper form*, which is deferred until another time.

In the discussion, Dr. G. C. Paoli spoke of the information on this subject that a writer advanced last year, and published in one of the British medical journals. I desire to state, also, that another test for albumen is in placing a crystal of metaphosphoric acid as large as a small pea in the suspected urine, and if albumen is present, will be followed by the usual reaction, and further, that a crystal of pure carbolic acid used in the same manner, is also a sure test for albumen. He had heretofore been content in using concentrated nitric acid, chemically pure, as a sufficiently reliable reagent for albumen, which is so well known as to not require further detail.

The hour being late, the society then adjourned.

L. H. M.

BOOK REVIEWS.

THE DISEASES OF CHILDREN. A Handbook for Practitioners and Students. By ARMAND SEMPLE, B.A., M.B.; M.R.C.P., London. Physician to Northwestern Hospital for Children. New York: G. P. Putnam's Sons, 1884. Pp. 352.

The small size of this work and the great extent of the subject it covers, has rendered condensation and brevity of style a necessity. It is true that the whole subject has been traversed in its pages, but in many instances in a fashion extremely unsatisfactory to the reader.

In the discussion of the diseases of the spinal cord and its membranes, all mention of *treatment* is omitted from the sections devoted to "spinal irritation," "spinal hæmorrhage," "myelitis," "spinal meningitis," and "hydrorachis." For these five affections, the important question of treatment is dismissed with the following brief paragraph at the foot of the last page in the chapter:

"Treatment of Spinal Diseases.—In acute inflammation of the spinal cord, the patient must be kept in the recumbent position. The prone position is also very useful. Ice may be constantly applied along the spine; blisters, or an issue on each side of the spine have been recommended, or even a few leeches. The value of drug medication is doubtful, but in spinal affections of rheumatic origin, iodide of potassium and colchicum may be employed with advantage. Belladonna, conium, and ergot, are by some considered to act beneficially when the cord is involved."

Not less curtailed are the descriptions of many of the most common and important diseases, so that the book can only claim to be a compend at best. With the exception of a few minor inaccuracies, the work has been carefully done and is fairly creditable, but displays no great originality of thought or investigation.

A MANUAL OF OBSTETRICS. By A. F. A. KING, M.D., Professor of Obstetrics in Columbian Univ., Washington, D. C., and in the Univ. of Vermont, etc. Second Edition. Philadelphia: Henry C. Lea's Sons & Co., 1884. Pp. 338.

This is a text-book for students. The author has compiled with good judgment from Leishman, Play-

fair, and Lusk, a fair outline of the essential principles of midwifery, and has done his work so well that graduates as well as students will find the manual a convenient one.

It is, however, confessedly a work for beginners. Its discriptions are terse and clear, its directions bluntly stated, without unnecessary explanations.

The use of short paragraphs with capitalized headings, makes reference quick and certain, and aids the memory of the learner in preparing for examinations. This is a type of book now becoming quite common in America, an admirable type too, for the purpose intended.

ECZEMA AND ITS MANAGEMENT. A Practical Treatise Based on the Study of Three Thousand Cases of the Disease. By L. DUNCAN BULKLEY, A.M., M.D., Attending Physician, New York Hospital Skin and Venereal Diseases, etc., etc. Second Edition G. P. Putnam's Sons, New York.

Dr. Bulkley, in the second edition of his valuable treatise, has made no radical changes in form or contents. The book still remains, as the author expresses it, "a personal one," representing his own experience, with data of many hundreds of cases from private practice. It covers, nevertheless, all the ground of a complete treatise on eczema thoroughly and systematically, and embodies avowedly the views of prominent dermatologists as well as those of the writer.

Statistics are furnished of 3,000 cases. Separate chapters are devoted to the nosology of eczema, to its pathological anatomy, to its diagnosis, to its treatment, and to its special localities.

A copious general index and a complete formulary are appended, making the treatise one of much practical utility to the practitioner. It will be received with favor by the profession, and serve a useful purpose in supplying a thorough and tangible summary of modern investigations of this protean affection, a knowledge of which really constitutes a key to the whole specialty of dermatology.

DOMESTIC CORRESPONDENCE.

FROM WASHINGTON.

MEDICAL MATTERS BEFORE CONGRESS—THE BUREAU OF ANIMAL INDUSTRY—PROVISIONS OF THE PLEURO-PNEUMONIA BILL AS IT PASSED THE SENATE.—April 29.—As amended and passed by the Senate, the bill providing for the establishment of a Bureau of Animal Industry and the extirpation of contagious cattle diseases, provides, that the Commissioner of Agriculture shall organize in his department a Bureau of Animal Industry, with a chief, who shall be a competent veterinary surgeon, and who shall investigate and report the condition of the domestic animals of the United States, and the causes of contagious, infectious, and communicable diseases among them. He shall also collect such other information on these subjects, as may be valuable to the agricultural, or commercial interests of the United States. For the purposes of the Bureau, the Commissioner of Agriculture is authorized to employ a force, not to exceed twenty persons at one time. The salary of the chief of the Bureau is fixed at $3,000; that of the clerk at $1,500. The Commissioner is to appoint two competent agents, who shall be practical raisers of, or men experienced in, commercial transactions affecting live stock, who shall report the best manner of transporting and caring for animals, and the means to be adopted to suppress and extirpate pleuro-pneumonia and other dangerous contagious or communicable diseases. The compensation of such agents is fixed at $10 per day.

The Commissioner is to prepare, as early as possible, such rules and regulations as may be necessary to extirpate the diseases named, and certify such rules, etc., to the executive authority of each State and Territory, and invite the coöperation of such executive authority in the execution of the Act of Congress. When the rules, etc., shall have been accepted by such executive authority, the Commissioner may expend in the State so accepting so much money as may be necessary for the purpose of the investigations contemplated by the act, and for such disinfection and quarantine measures, as may be necessary to prevent the spread of the disease from one State or Territory into another.

In order to promote exportation of live stock, special investigation shall be made as to the existence of contagious diseases along the dividing line between the United States and foreign countries, and along the transportation lines from all parts of the United States to ports from which cattle are exported, and reports made to the Secretary of the Treasury, who shall coöperate with the State and municipal authority, corporations, and persons engaged in transportation of neat cattle by land or water, in establishing regulations for the safe conveyance of the cattle, and preventing the spread of disease; and the Secretary of the Treasury is authorized to take such steps as may be necessary, not inconsistent with the act, to prevent the exportation of cattle affected with any contagious disease, especially pleuro-pneumonia. Transportation companies are forbidden to transport cattle affected with any contagious disease from one State or Territory to another, but the so-called splenetic or Texas fever is excepted from the category of communicable diseases, so far as regards the transportation of the cattle to market. Violation of the act by railroad companies or vessels is declared a misdemeanor on the part of the manager or captain, punishable by fine not to exceed $5,000, or by imprisonment not to exceed one year, or by both. It is made the duty of the United States District Attorneys to prosecute the cases.

The sum appropriated for the purposes of the act is $150,000. The Commissioner of Agriculture is required to report annually to Congress a full account of the operations of the bureau, a list of all persons employed, their compensation, etc.

The third annual Commencement of the Washington Training School for Nurses took place on May

2, when four skilled women were graduated. Addresses were made by Prof. D. W. Prentiss, M.D., the President of the Board of Trustees, Dr. P. J. Murphy, Surgeon-in-charge of the Columbia Hospital for Women, and Dr. W. W. Godding, Superintendent of the Government Hospital for the Insane.

The graduating exercises of the medical department, University of Georgetown, took place on April 30. Diplomas were conferred by Rev. S. J. Doonan, S.J., President of the University, on the following graduates: Dexter A. Smith, Illinois; J. Paul Chambers, Pennsylvania; Thomas W. Burke, Ireland; and D. Percy Hickling, George E. Harvey, Carroll M. Rawlings and B. F. Madison, District of Columbia. The valedictory address was delivered by Dr. Dexter A. Smith, of the graduating class. The address to the graduates was made by Prof. M. C. Ellzey. Dr. Joseph Taber Johnson then presented a prize valued at $75 to Dr. Dexter A. Smith for passing the best examination; a prize, consisting of a case of surgical instruments, to Dr. John B. Hawes, of California, and a set of post-mortem instruments to Dr. J. W. Morgan, of the District of Columbia.

The American Surgical Association completed its sessions on May 3. The meetings were held in the National Museum, and some forty members were registered. A telegram of sympathy was sent to Prof. Gross. Almost all of the papers published in the official programme were read and discussed. Private receptions and an informal dinner constituted the entertainments.

MISCELLANEOUS.

NERVOUS SIALORRHŒA.—M. Gilles de la Tourette (*Revue Medicale*) records the case of a patient in the service of M. Charcot, who for some time had suffered from nervous and cerebral symptoms, and who was suddenly attacked with a sharp pain in the parotid region, which was immediately followed by an abundant secretion of saliva, which was clear and viscid, presenting all the characteristics of parotid saliva. This sialorrhœa followed the same oscillations as the pain, diminishing with it and increasing with the neuralgic exacerbations. In twenty-four hours there was a discharge of twelve hundred grammes of liquid, much more than has been noted in pathological cases or after the use of sialogogues. One peculiarity was that physical and chemical examination showed this fluid to be purely the secretion of the parotid gland. It is absolutely impossible by means of jaborandi, or other sialogogues, to disassociate the various glandular secretions in salivation. Another point is that the saliva was loaded with white corpuscles, and the epithelial cells of the mucous membrane of the mouth, but contained no trace of the caciliform cellules of the glandular crypts. These hypercrinic disturbances in the course of neuralgic attacks are in no ways new—the discharge of tears and nasal discharges are among the prosopalgias—but such an excessive secretion with a moderate neuralgia, has not before been recorded. Recognizing the neuropathic condition of the subject, we are justified in determining the cause as in the manifest disturbance of the nerve centers.

A case of an ataxic, reported by Archibald Wilson, in the *France Medicale*, presents certain resemblances to the one just referred to. This latter patient presented symptoms that were very characteristic of his trouble, such as a want of coördination in walking, loss of the patella reflex, fulgurating pains, etc. Besides which, he had a modification of the cutaneous sensibility, and attacks of suffocation which were indicative of laryngeal affection. He also suffered from sudden crises of salivation and of urination which occurred without any appreciable cause. M. Feré designated them as perfect diarrhœas, occurring from some nervous influence exercised upon the spinal cord.

AMERICAN NEWSPAPERS IN 1884.—From the edition of Messrs. Geo. P. Rowell & Co.'s American Newspaper Directory, now in press, it appears that the newspapers and periodicals of all kinds at present issued in the United States and Canada reach a grand total of 13,402. This is a net gain of precisely 1,600 during the past twelve months, and exhibits an increase of 5,618 over the total number published just ten years since. The increase in 1874 over the total for 1873 was 493. During the past year the dailies have increased from 1,138 to 1,254; the weeklies from 9,062 to 10,028; and the monthlies from 1,091 to 1,499. The greatest increase is in the Western States. Illinois, for instance, now shows 1,009 papers in place of last year's total of 904, while Missouri issues 604 instead of the 523 reported in 1883. Other leading Western States also exhibit a great percentage of increase. The total number of papers in New York State is 1,523, against 1,399 in 1883. Canada has shared in the general increase.

NEW BOOKS.

Terrier. Remarques cliniques sur un cas d'ophtalmie survenu dans le cours d'un rhumatisme articulaire aigu. Paris: Davy 8vo., 15 pp.

Vernenil. Amputation du col de l'utérus avec l'écraseur linéaire, remarques sur l'emploi de cet instrument. Paris: Asselin et Cie. 8vo., 39 pp.

Vincent, A. Recherches sur l'élimination de l'iodure de potassium par les urines. Lyon: Imprimené nouvelle. 4vo., 45 pp.

Adler, Dr. Hans. Drei Fälle v. Jequirity-Ophthalmie; über die Nothwendigkeit der Einführung neuer Massregeln zur Bekämpfung der Blennorrhoea neonatorum; als e. der häufigsten Ursachen der Erblindung. Wiesbaden: Bergmann. 8vo., 12 pp.

Fritsch, Med.-R. Dir. Prof. Dr. Heinr. Die Krankheiten der Frauen, Aerzten u. Studirenden geschildert. 2. umgearb. u. verm. Aufl. Mit 164 Abbildgn. in Holzschn. 8vo, x, 453 pp. Braunschweig, Wreden.

Hoffmann, Lehr. Dr. G. Acht Skelett-Tafeln (in Lichtdr.) zum Einzeichnen v. Gelenkbändern, Muskeln u. anderen Organen. Ein Hülfsmittel zum Studium der Anatomie d. Menschen. Fol., 1 S. Text. Berlin: Gaertner. In Mappe.

Löwit, Privatdoc. Assist. Dr. M. Ueber die Bildung rother u. weisser Blutkörperchen. Mit 2 lith. Taf. Aus "Sitzungsber. d. k. Akad. d. Wiss." Lex. 8, 46 pp. Wien, 1883: Gerold Sohn.

Pilley, J. J. Hygiene; or, the Principles of Health, Adapted to the Requirements of the Science and Art Department, South Kensington. 8vo, 178 pp. London: Gill. 1s 6d.

Thudichum, J. L. W. Aids to Public Health. 12mo. 50 pp. London: Bailliere. 1s.

Thudichum, J. L. W. A Treatise on the Chemical Constitution of the Brain, based throughout on Original Researches. 8vo, 282 pp. London: Bailliere. 1s 6d.

Tyrrell, W. The Tonic Treatment of Epilepsy. 4th edit. 8vo. London: Bogue. 2s 6d.

Woakes, E. Post-Nasal Catarrh and Diseases of the Nose, causing Deafness, being Vol. I of the 3d edit. of "Deafness, Giddiness, and Noises in the Head." 8vo, 220 pp. London: Lewis. 6s 6d.

Archambault. Leçons Cliniques sur les Maladies des Enfants. 8vo, Vol. VIII, 158 pp. Paris: Delahage et Lecrosnier.

Auvard, A. De la Pirce à Os et du Cranioclaste, étudè historique et experimentale. 4to, 248 pp. Paris: Doin.

Chartemesse, A. Étude sur la Méningite tuberculeuse de l'adults, les formes a normales en particulier. 4to, 188 pp. Paris: Goupy et Jourdan.

Chavée-Leroy. Les Microbes Organisés at la Crémation; Réflexions et Objections sur les Mémoires de M.M. Tyndall et Pasteur. 2d edit., revue et augmentie. 12mo, 38 pp., avec figure. Paris: Michelet. 60c.

Citerne, P. Contribution à l'étude des Abcés froids des Parvis du Thorax. 8vo, 65 pp. Paris: Davy.

Debove. Leçons Cliniques et Thérapeutiques sur la Tuberculose Parasitaire, faites à la Clinique de la Pitié. 8vo, 96 pp. Paris: Delahage et Lecrosnier.

Fournié, A. Hontribution à l'étude du Convallaria Maialis. 4to, 51 pp Montpellier: Hamelin frères.

Hamon, A. Hygiéne Publique; Étude sur les Eaux Potables et le Plomb. 12mo, 72 pp. Paris: Delahage et Lecrosnier.

Henrionnet, P. De l'engagemet de l'extrémité Pelvienne pendant la Grossesse. 8vo, 57 pp. Paris: Davy.

Kocher, A. De la Criminalité chez les Arabes au Point de Vue de la Pratique Médico-Judiciaire en Algérie. 4to, IV, 243 pp. Lyon: Pitrat ainé.

Lamaison, H. Du lupus Érythémateux. 4to, 85 pp. Montpellier: Cristin, Serre et Ricome.

Mebling, S. J. Cure Radicale de l'Hydrocèle par la Méthode de l'Incision avec les Précautions Antiseptiques. 8vo, 132 pp. Montpellier: Bœhm et fils.

Neugebauer, F. Contribution à la Pathogénie et au Diagnostic du Bassin Vicie par le Glissement Vertébræ (spondylisthésis). Paris: Lauwereyns.

Nicolas, A. Contribution à l'Étude de l'Arthrotomie Antiseptique. 8vo, 161 pp. Nancy: Sordvillet.

Flint, Austin. A Treatise on the Principles and Practice of Medicine. 5th edition, rev., with an appendix on the researches of Koch, and their bearings on the ætiology, pathology, diagnosis, prognosis, and treatment of pulmonary phthisis. Phila: H. C. Leas Sons & Co. 8vo., 1,160 pp., cl. $5.50.

Hun, H. A Guide to American Medical Students in Europe. New York: W. Wood & Co. 151 pp., 8vo., cloth. $1.25.

Kelsey, C B. The Pathology, Diagnosis, and Treatment of Diseases of the Rectum and Anus. New York: W. Wood & Co. 430 pp., il. and pl., 8vo., cl. $4.

Paul, Constantin. Diagnosis and Treatment of Diseases of the Heart; from the French. New York: W. Wood & Co. 335 pp, il., 12mo. (Wood's Lib. of Standard Medical Authors) Cl. subs., $1.25.

Power, H. Elements of Human Physiology. Phila: H. C. Lea's Sons & Co. 399 pp., 47 il, 8vo (students' Series of Manuals), flex. cl. $1 50.

Richardson, B Ward. The Field of Disease: a book of preventive medicine. Phila: H. C. Lea's Sons & Co. 737 pp., 8vo., cl. $4; shp., $5; hf. Rus., $5.50.

Roosa, D. B. St. John. A Vest Pocket Medical Lexicon. New rev ed. New York: W. Wood & Co. 320 pp., fl. roan 75c.

Woodhead, G. Sims Practical Pathology. Phila: H. C. Lea's Sons & Co. 484 pp., 136 col. pl., 8vo., cloth. $6.

Carey, A. Principles of Hygiene. 12mo., pp 158. 1s. 6d. London: Murby.

Fluckiger, F. A. The Chinchona Barks Pharmacognostically Considered. Translated from the original text, with some additional notes, by Frederick B. Power With 8 lithographic plates and 1 woodcut. 8vo. 7s. London: Churchill.

Girdlestone, E. D. Vivisection in its Scientific, Religious, and Moral Aspects. 8vo., pp. 68. 1s. London: Simpkin.

Jones, H M. On the Treatment of Spinal Curvatures by Extension and Jacket. With Remarks on some Affections of the Hip, Knee, and Ankle Joints. 8vo., pp. 138. 4s. 6d. London: Churchill.

Philpot, H. J. Diabetes Mollitus: a synopsis of its pathology, ætiology, incipient and progressive symptoms, causes of death, sugar tests, and treatment. 8vo., pp. 112. 5s London: Low.

Abadie, C. Quelques considérations practiques sur l'ophtalmie sympathique. 8vo, 10 pp. Paris: Davy.

Andret, L. Des manifestations cutanées de la blennorrhagie. 8vo., 40 pp. Paris: Davy.

Arnaud, P. Contribution à l'étude de l'endométrite dans la blennorrhagie. 8vo., 99 pp Paris: Davy.

Bardy, H. L'Empoisonnement par les champignons. 8vo., 19 pp. Saint-Die, Il. Humbert.

Batault. Contribution à l'étude du pausement des fractures compliqués de plaies. 8vo, 59 pp. Paris: Davy.

Biat, V. Péritonite tuberculeuse à forme ascitique. 8vo., 58 pp. Paris: Davy.

Bourel-Roncière, A. Kystes hydatiques des muscles. 8vo., 47 pp. Paris: Davy.

Doléns, A. Observation d'un cas de rupture utérine suivie de guérison. 8vo., 24 pp. Paris: Davy.

List of Changes in the Stations of Medical Officers, U. S. Navy, for the Week ending May 10, 1884.

P. A. Surgeon C. W. Gravatt, detached from Naval Hospital, Chelsea, and ordered to U. S. Str. "Michigan."

P. A. Surgeon G. E. H. Harmon, detached from "Michigan" and granted leave of absence.

Assistant-Surgeon T. M. Edgar, ordered for examination preliminary to promotion.

Official List of Changes in the Stations and Duties of Officers Serving in the Medical Department United States Army, from May 3, 1884, to May 9, 1884.

Webster, Warren, Major and Surgeon, granted leave of absence for six months, from April 29, 1884, on account of sickness. (Par. 5, S. O. 103, A. G. O., May 3, 1884.)

Sternberg, Geo. M., Major and Surgeon, now at Governor's Island, New York Harbor, ordered to repair to this city (Washington, D. C.) to represent the Medical Department of the Army at the annual meeting of the American Medical Association, to meet on May 5, 1884, and on adjournment of the Association to return to Governor's Island. (Par. 2, S.O. 103, A. G. O., May 3, 1884.)

OFFICERS OF

THE AMERICAN MEDICAL ASSOCIATION

AND OF ITS SEVERAL SECTIONS, 1884–5.

PRESIDENT.

Dr. H. F. CAMPBELL, of Georgia.

FIRST VICE-PRESIDENT.
Dr. J. S. Lynch, of Maryland.

SECOND VICE-PRESIDENT.
Dr. S. D. Mecer, of Nebraska.

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Dr. Wm. B. Atkinson, 1400 Pine St., Philadelphia.

TREASURER.
Dr. R. J. Dunglison, Philadelphia.

LIBRARIAN.
Dr. C. H. A. Kleinschmidt, Washington, D. C.

Place of meeting, 1885, New Orleans, La.; Time of holding meeting, last Tuesday in April.

CHAIRMAN COMMITTEE OF ARRANGEMENTS.

ASSISTANT SECRETARY.
Dr. W. H. Watkins, Louisiana.

BOARD OF TRUSTEES FOR JOURNALIZING THE TRANSACTIONS.

Drs. J. M. Toner, Washington, D. C., President;
M. Moore, Rochester, N. Y.; Leartus Conner, Detroit, Mich.;
J. H. Packard, Philadelphia, Secretary;
H. F. Campbell, Augusta, Ga.; A. Garcelon, Lewiston, Me.;
P. O. Hooper, Little Rock, Ark.;
L. S. McMurtry, Danville, Ky.; J. H. Hollister, Chicago, Ill.

OFFICERS OF THE SECTIONS:

"Practice of Medicine."
Chairman—Dr. H. Didama, New York; Secretary—Dr. J. M. Garland, Massachusetts

"Obstetrics and Diseases of Women."
Chairman—Dr. R. S. Sutton, Pennsylvania; Secretary—Dr. J. T. Jelks, Hot Springs, Ark

"Surgery and Anatomy."
Chairman—Dr. Duncan Eve, Tennessee; Secretary—Dr. E. B. King, Pennsylvania.

"Ophthalmology, Otology and Laryngology."
Chairman—Dr. J. A. White, Virginia; Secretary—Dr. Eugene Smith, Michigan.

"Diseases of Children."
Chairman—Dr. J. H. Pope, Texas; Secretary—Dr. S. S. Adams, D. C.

"Oral and Dental Surgery."
Chairman—Dr. W. W. Allport, Chicago, Ill.; Secretary—

"State Medicine."
Chairman—Dr. E. W. Schaefer, Maryland; Secretary—J. M. McCormick, Kentucky

Committee on "Necrology."
Chairman—Dr. J. M. Toner, Washington, D. C.

THE

Journal of the American Medical Association.

EDITED FOR THE ASSOCIATION BY N. S. DAVIS.

PUBLISHED WEEKLY.

VOL. II. CHICAGO, MAY 24, 1884. NO. 21.

ORIGINAL ARTICLES.

AMERICAN MEDICAL ASSOCIATION.

THIRTY-FIFTH ANNUAL MEETING, HELD IN WASHINGTON, TUESDAY, WEDNESDAY, THURSDAY, AND FRIDAY, MAY 6, 7, 8, AND 9, 1884.

TUESDAY — FIRST DAY.

The meeting was called to order in the Congregational Church, at the corner of Tenth and G Streets, at 10:30 A. M., by the Chairman of the Committee of Arrangements, Dr. A. Y. P. Garnett. After prayer by the Rev. William A. Leonard, D.D., the Chairman introduced the President of the Association, Dr. Austin Flint, of New York. The Vice-Presidents, Dr. R. A. Kinloch, South Carolina; Dr. T. B. Lester, Mo.; Dr. A. L. Gihon, U. S. N.; Dr. S. C. Gordon, Me.; the Permanent Secretary, Dr. W. B. Atkinson, Pa.; the Assistant Secretary, Dr. D. W. Prentiss, D. C.; the Treasurer, Dr. R. J. Dunglison, Pa.; and the Librarian, Dr. C. H. A. Kleinschmidt, D. C., were also present.

Dr. Garnett addressed the Association as follows:

GENTLEMEN OF THE AMERICAN MEDICAL ASSOCIATION:

Through the favor of your suffrages at our last meeting, I find myself occupying the position which imposes upon me the pleasant duty of tendering to you, on behalf of the medical profession of Washington, our welcome to this the capital of these United States; and sincere and honest as my words of welcome are, you will find, I am sure, in the more intimate association that will follow this formal reception, that words are weak to express the cordiality of our greeting.

You have come to a place of eminent and renowned gatherings, for here the supreme interests of our whole country are studied and discussed by its larger intellects, in order to the discovery and enforcement of those political and constitutional laws which shall best establish and maintain the well-being of the Republic. And surely it is a fit place for your meeting, for no laws devised by human wisdom can be more important to humanity than those laws of life upon which rests the "*salus populi*"—laws to the study and comprehension of which, in their truest and most literal sense, your time and labor are devoted; and in no department of human effort has there been needed or has there been found keener, broader, more conscientious intellect than has been exhibited in the long historic growth and in the recent rapid development of medical science.

For the wise and stable government of a nation, as well as for the comfort of domestic life and the success of humble labor, we recognize no more important and necessary condition for him who executes the work, and for those who are to profit by it, than the preservation of that "*mens sana in corpore sano*," which it is the highest effort of our profession to secure.

There is, perhaps, in our profession one advantage possessed by no other deliberative body which is called to consult for interests as wide as the whole country. We may come—indeed, we doubtless do come—with some stubborn prejudices and fixed opinions; but we are not affected by sectional interests, nor by party ambitions; we have no constituencies to whom we are responsible; we move in a higher plane, and are answerable alone to the dictum of scientific truth. The truths we discover cannot be patented for individual use, nor converted into practical profit by huge monopolies. The remedy discovered by one man's patient and laborious study is the possession of all, and is carried by the country doctor in his saddle-bags to the humblest log cabin in the remotest settlement as freely as it is given by the great practitioner in the homes of the wealthy and powerful.

Contemplating the vast and varied field from which our information is derived, the thought comes to me—if I could sketch only the past year of the professional life of those who are met here to-day, what a multitude of profound and perplexing problems, what strange illustrations of the mysterious laws of life, what startling and apparently inexplicable exceptions to those very laws, what new suggestions as to function and organ—what uncertain but hopeful premonitions of wider and richer discovery would I have to lay before you.

Let us consider, too, the tone and temper of that spirit of inquiry in which our experience has trained us. For ours has not been the investigation of merely material facts; we have studied the finer tissue of nerves and the coarser tissue of muscles, but we have seen the one quiver and the other waste under influences beyond the analysis or control of medicine; we have seen the strong and active mind broken and palsied by disease of the body, and we have seen the mind control, and shape, and stamp its will upon the body, until, to the uneducated intelligence, as in those strange but well authenticated cases of the

stigmata, a very miracle seemed present. We have seen the painful evidence of that terrible truth, that often vice itself is disguised congenital disease. We have stood on the very border of life and of death—but we have never seen beyond. We have seen man as he is seen by no one else; we have seen him in his moments of highest heroism and of abjectest cowardice, of sublimest self-sacrifice and of basest selfishness; we have witnessed at the bedside the pleading hope, which is man's intensest prayer, and the defiant despair, which is his bitterest curse. What, in comparison to such experience, I ask is the knowledge of human nature acquired in the confidential council chamber of the lawyer, or learned in the secrecy of the confessional, even when remorse wrings truth from the penitent?

And yet does our daily experience force us to recognize with humility that beyond all our knowledge there are experiences we cannot understand, laws we cannot explain or regulate, and powers and influences which we cannot control.

We have also been taught *that* sympathy which familiarity with human suffering always excites in the mind of the true-hearted physician, and which enables him to determine more accurately the true condition of his patient than the conclusions of a purely cold intelligence.

And should we not be taught by the mental, moral and physical relations which these experiences bring before us, an abiding faith in the wisdom of that Being who has made the ministry of pain and death a part of His divine administration in nature, and in nature's order of animate life?

With these convictions of our duties and responsibilities, no language of mine can exaggerate the value and importance of these periodical gatherings, when we meet to compare experiences, to exchange counsel, and to contribute what each of us can to broadening and extending the power of medical science.

For of that power it can be said, as can be said of no other, that it has in it no faculty of oppression—that it is not sought, but freely and gratefully given, and that it cannot be exercised without doing good to others.

He offered the following report of arrangements:

The Committee of Arrangements, having executed the duty for which it was created, beg leave to submit the following report:

After a careful inspection of the various public edifices available for our use in this city, it was found that the Congregational Church, in which we are now assembled, possessed the largest seating capacity, together with three capacious rooms suitable for the meeting of the Sections. It was accordingly selected as the most eligible building for our meeting. We have also secured for the Surgical Section, and for the accommodation of the Judicial Council, capacious apartments in the Armory Building, on G street, diagonally opposite this church.

For the meeting of the Section on State Medicine, and that on Dental and Oral Surgery, we have been compelled to select the hall on the south-east corner of Sixth and F streets, being less accessible on account of the distance from this point. With regard to effecting arrangements with the various railroads for the reduction of rates, we beg to say that the most active and energetic measures were adopted early in the year to accomplish this purpose. Correspondence was had with the officials of all the trunk lines, but owing to the delay on the part of those having the power to act in this matter, we have only been able to effect final arrangements within the past three weeks. The following terms have been agreed upon, and the statement sent to the Secretary, Dr. W. B. Atkinson, some three weeks ago, together with a price list of the hotels and principal lodging-houses of Washington, in order that the information might be given to the medical public:

1. The Virginia Midland railroad will issue round trip tickets from all through points at 4 cents per mile one way, for the round trip; local points, 4½ cents per mile one way for round trip.

2. Boston, Norfolk and Baltimore steamship line, Boston to Washington, $9.50; round trip, $19.

3. Trunk lines east of St. Louis, Chicago and Cincinnati agree to return delegates at one-quarter lowest unlimited rate.

4. Trunk lines west of St. Louis and Chicago agree to return delegates at one-third regular rate.

5. Atlantic Coast lines have agreed to issue round trip tickets at reduced rates from various points.

6. Pennsylvania railroad and Baltimore & Ohio railroad will issue round trips from New York City $9.80, Philadelphia $6.10, Baltimore $1.60.

7. The Southern Association, embracing the territory south of the Potomac and Ohio and east of the Mississippi, excepting the Virginia Midland and Coast line, refuse to reduce rates.

PROGRAMME FOR TUESDAY'S RECEPTIONS.

We are gratified to announce that there will be a reception by the President of the United States at the Executive Mansion from 8:30 to 10:30 p. m. Reception by Mr. and Mrs. Leiter, No. 1500 Twentieth Street, Northwest, from 9 to 11 p. m.

Wednesday.—Reception and entertainment by the medical profession of Washington at National Rifles' Armory, 920 G Street, Northwest, from 9 to 12 p. m.

Thursday.—Illumination of the Corcoran Art Gallery, and Reception by Mr. W. W. Corcoran and Board of Trustees, from 8 to 10 p. m.

Reception by Commissioner and Mrs. Loring, No. 1521 K Street, Northwest, from 9 to 11 p. m.

Reception by Mr. and Mrs. W. T. Hildrup, No. 1 Iowa Circle, from 9 to 11 p. m.

Reception by Chief Justice Morrison R. Waite, No. 1415 I street, Northwest, from 9 to 11 p. m.

Friday.—Reception by the Surgeon-General, U. S. A., and Staff, at Army Medical Museum, Tenth Street, between E and F Streets, Northwest, from 8 to 11 p. m.

Reception by Hon. George F. Edmonds, President *pro tempore* of the Senate, and Hon. John G. Carlisle, Speaker of the House of Representatives, in the Marble Room, Senate side of the Capitol, at 8 p. m. Illumination of the Capitol from 8 to 10 p. m.

At the suggestion of our honored President, invitations were sent to several of the most distinguished

physicians and surgeons in Europe, inviting their attendance or any contribution of papers which they might feel disposed to make at the present meeting.

Several responses were received and one paper sent as a contribution, by Mr. A. Pearce Gould, F.R.C.S., of London. If it is the pleasure of the Association these letters will now be read.

The Chairman of the Committee of Arrangements embraces this opportunity to call attention to the flagrant and unexcusable manner in which the By-laws relating to the time of reporting titles of papers to be read before the Sections, and other matters to be included in the programme, has been disregarded.

The embarrassment to the committee occasioned by such neglect on the part of those who prepare papers, can only be appreciated by the unfortunate individual who is subjected to it, and he therefore earnestly hopes that some means may be found to enforce the law in this regard and spare the patience of his successor. More than one-half of the matter to appear in the programme was reported to the committee after the 1st of April, notwithstanding a notice had been published in the official journal two months before, calling attention to the By-law on this point. He further begs leave to suggest that the office of Assistant Secretary (which at present seems to be a superfluous one) be more specifically defined and its duties clearly and intelligently designated.

In closing this report, the Chairman begs to express his grateful acknowledgments to the whole committee, for its hearty coöperation and support, but especially does he desire to return his thanks to the chairmen of the several sub-committees for their active and efficient assistance in prosecuting this vexatious labor of love.

COMMUNICATIONS acknowledged by Dr. Garnett from A. Pearce Gould, F. R. C. S., of London, and from other eminent medical men of Europe, which on motion were received and filed.

THE REGISTRATION.—The Secretary read the list of registered delegates up to the time of the morning session, having been called to order, the whole number being 590. On motion of Dr. J. M. Toner these were confirmed.

INVITED GUESTS.—Dr. J. H. Trumbull, of South America; Dr. Jonas A. Marshall, of Massachusetts; Dr. F. R. Garloch, of Wisconsin, and the members of the Medical Association of the District of Columbia, not already members, were invited to seats in the meeting.

A LETTER FROM DR. JOHN L. ATLEE, of Pennsylvania, an ex-President of the Association, expressing his regret at being unable to attend the meeting, was read by the Secretary and ordered to be entered on the minutes.

Vice-President Dr. R. A. Kinloch occupying the chair, the President then delivered the annual address.

On motion of Dr. Toner, thanks were tendered to the President for his address, and a copy was requested for publication.

On motion of Dr. Toner the following was adopted:

WHEREAS, it has come to the knowledge of the American Medical Association, that one of its former Presidents, and a surgeon of world-wide reputation, and whom we miss among us, is at this time confined to his room by serious illness. Therefore be it

Resolved, That the American Medical Association extends Prof. S. D. Gross its heartfelt sympathy in his suffering, and expresses its earnest hope for his speedy and complete recovery, and many years of usefulness in the profession he has so signally adorned, and for the enjoyment of the well-earned reputation he has won throughout the world.

Resolved, That a copy of these resolutions may be conveyed by the Secretary to Prof. Gross.

On motion of Dr. A. L. Gihon, of the U. S. Navy, that portion of the President's address referring to Professor Gross was ordered to be telegraphed to him at once, as an appropriate form of expression of the sentiments of the Association.

Dr. T. G. Richardson, of La., stated that he had only recently come from the bedside of Dr. Gross, who, when asked whether he had any word to send to the Association, said, in a feeble voice: "Give them my love."

On motion of Dr. L. A. Sayre, of New York, the resolutions offered by Dr. Toner were ordered to be telegraphed to Dr. Gross. And, on motion of Dr. W. L. Schenck, of Kansas, it was further resolved that the expression of love on the part of Dr. Gross toward the Association be acknowledged and reciprocated.

The Secretary read the following telegram from Dr. W. O. Baldwin, of Alabama:

PASS CHRISTIAN, MISS., MAY 5, 1884.

Dr. Austin Flint, Sr., President Am. Med. Ass'n, Washington:

I deeply regret my inability to be with you; my failure to attend is due wholly to ill-health. You know how sincerely my heart is with you. May God prosper the good work. I am banished here on account of poor health.

W. O. BALDWIN.

On motion, it was ordered to be entered on the minutes.

On motion of Dr. Sayre, that portion of the President's address suggesting that the International Medical Congress be invited to meet in this country in 1887, was referred to a special committee of five, of which Dr. Billings should be the chairman.

Several resolutions were offered regarding that portion of the President's address relating to medical ethics, for which the following, by Dr. Ferguson, of New York, was finally substituted and adopted:

Resolved, That that portion of the President's address referring to the subject of medical ethics be referred to a committee of seven, to report upon the recommendations therein contained as speedily as possible.

The titles of several papers not on the printed list were then read, and, on motion, they were referred for reading before the appropriate Sections.

Dr. A. Blumberg, of Pennsylvania, and Dr. B. F. Shreeve, of Iowa, were invited to seats in the meeting, and the session was then adjourned until Wednesday at 10 A. M.

WEDNESDAY—SECOND DAY.

The meeting was called to order at 10 a. m. by the President. A prayer was offered by the Rev. W. A. Bartlett, D.D.

The President formally announced the death of Professor Samuel D. Gross, of Philadelphia, and appointed the following committee to take such action as it might think proper in the matter: Dr. T. G. Richardson, of Louisiana; Dr. L. A. Sayre, of New York; Dr. J. H. Packard, of Pennsylvania; Dr. F. H. Hamilton, of New York; Dr. Moses Gunn, of Illinois; Dr. W. T. Briggs, of Tennessee; and Dr. I. M. Hays, of Pennsylvania. On motion of Dr. H. C. Ghent, of Texas, the President of the Association was added to the committee as its chairman. The Secretary read the following dispatch from Dr. Samuel W. Gross:

PHILADELPHIA, PA., MAY 6, 1884.

Dr. W. B. Atkinson, Secretary American Medical Association, Washington, D. C.:

The resolution and extract received too late. Convey to the Association the warm thanks of the family for its great kindness and consideration.

S. W. GROSS.

On motion this dispatch was ordered to be entered on the minutes.

Dr. Garnett, of the Committee of Arrangements, presented some protests, which were referred to the Judicial Council.

On his motion, Dr. C. D. Alton, of Connecticut, and Dr. A. W. Adair, of Iowa, were invited to seats.

The Permanent Secretary called the roll, and announced as the Committee on Nominations:

Alabama, Jerome Cochrane; Arkansas, P. O. Hooper; California, F. W. Hatch, Sr.; Colorado, Jesse Hawes; Connecticut, G. L. Porter; District of Columbia, J. W. H. Lovejoy; Dakota Ter., Hector Galloway; Delaware, W. Marshall; Florida, R. B. Burroughs; Georgia, W. F. Holt; Illinois, E. P. Cook; Indiana, T. B. Harvey; Iowa, H. C. Huntsman; Kansas, F. F. Dickman; Kentucky, W. H. Wathen; Louisiana, T. G. Richardson; Maine, F. C. Thayer; Maryland, J. S. Lynch; Michigan, H. F. Lyster; Mississippi, B. A. Duncan; Minnesota, D. Leasure; Massachusetts, Chas. A. Savory; Missouri, N. F. Essig; North Carolina, C. J. O. Hagner; New Hampshire, J. W. Parsons; Nebraska, S. D. Mercer; New Jersey, Jos. Parrish; New York, J. W. S. Gouley; Ohio, W. M. Beach; Pennsylvania, J. B. Murdock; Rhode Island, Jas. H. Eldredge; South Carolina, Wm. Huger; Tennessee, Duncan Eve; Texas, J. H. Pope; Vermont, Henry D. Holton; Virginia, Alex. Harris; W. Virginia, Geo. Beard; Wisconsin, Wm. Fox; U. S. Army, J. R. Smith; U. S. Navy, N. L. Bates; U. S. Marine Hospital, Walter Wyman.

The President appointed the following general committee on his annual address: Dr. N. S. Davis, Dr. W. W. Dawson, Dr. W. T. Briggs, Dr. T. F. Prewitt, Dr. D. W. Stormont, and Dr. H. B. Ransom. As the Special Committee, he named the following gentlemen: Dr. J. S. Billings, Dr. L. A. Sayre, Dr. R. H. Fitz, Dr. I. M. Hays, and Dr. H. F. Campbell.

The committee appointed to frame resolutions in favor of securing more competent medical and sanitary service on board trans-oceanic passenger vessels reported, through its chairman, Dr. A. N. Bell, of New York, that a bill had been prepared and presented to Congress which covered the matter.

Dr. T. D. Keyser, of Pennsylvania, made some remarks on the subject, and on motion of Dr. Foster Pratt, of Michigan, these points were referred to the committee, which was continued.

Dr. Irwin, of Canada, by invitation, made some remarks on the subject.

Dr. Gihon asked that Dr. Irwin formulate his ideas.

On motion of Dr. Foster Pratt it was

Resolved, That the Report of Progress by the Committee be accepted, that the Committee be continued and instructed to report upon the condition of the subject at the next session of the Association; also,

Resolved, That the American Medical Association now in session urge upon Congress through the respective Committees on Commerce of the Senate and House of Representatives the necessity of suitable and efficient legislation, to promote the well-being of emigrants to this country, and to protect our public health.

Dr. J. V. Shoemaker, of Pennsylvania, Chairman of Section on Practice, delivered his address.

On motion of Dr. W. Brodie, of Michigan, it was referred to that Section.

Dr. T. A. Reamy, of Ohio, Chairman of Section on Obstetrics and Diseases of Women, delivered his address.

On motion, the address was referred to that Section.

On motion, Dr. LeBaron Botsford and Dr. L. Stevens, of Canada, and Dr. J. W. Hanna, were invited to seats with the Association.

On motion of Dr. Henry H. Smith, of Pennsylvania, seconded by Dr. P. D. Keyser, of Pennsylvania, and Dr. J. C. Dalton, of New York, the following was adopted:

WHEREAS, It appears that an effort is being made to restrict, by legislative action, the practice of investigation in medical science by experiments on animals; and

WHEREAS, In the opinion of this Association such restriction is not needed for the guidance of medical men in their investigations, and would be an injury and a hindrance to the pursuit of medical knowledge and the improvement of the medical art; therefore

Resolved, That a standing committee of seven be appointed by the President of the Association, to be known as the "Committee on Experimental Medicine of the American Medical Association," charged with the duty of opposing, by all legitimate means, any interference with the progress of medical science by unwise or ill-considered legislation.

The President appointed as the Committee: Dr. H. C. Wood, of Pennsylvania; Dr. Wm. Pepper, of Pennsylvania; Dr. Jas. Tyson, of Pennsylvania; Dr. C. Johnson, of Maryland; Dr. J. C. Dalton, of New

York; Dr. A. Flint, Jr., of New York; and Dr. J. S. Billings, of United States Army.

Dr. LeGrand Atwood, of Missouri, on behalf of the St. Louis Medical Society, presented a paper objecting to the practice of physicians connected with colleges, etc., advertising, etc.

The matter was referred to the Judicial Council.

Dr. D. Benjamin, of New Jersey, offered the following:

Resolved, That this Association earnestly urges upon all American medical colleges the necessity of elevating the standard of education at least so far as to require a preliminary examination; a three years' course; a register of attendance, and practical demonstrations of diagnostic skill.

After much discussion, a motion to lay it on the table was lost, and after some further discussion, the resolution as offered was adopted.

On motion of Dr. J. H. Packard, of Pennsylvania, certain amendments to the Constitution and By-laws offered at Richmond, were made the special order for Thursday, immediately after the addresses for that day.

The Permanent Secretary read an invitation from Prof. Baird of the United States Fish Commission, for the members of the Association to visit the institution and observe the hatching of shad, which, on motion, was received with thanks.

On motion, the Association adjourned until Thursday, at 10 A. M.

THURSDAY—THIRD DAY.

The Association was called to order by the President at 10 A. M., and prayer was offered by the Rev. W. Paret, D.D.

On motion of Dr. J. M. Taller, it was

Resolved, That the records of the meeting held at St. Paul, in 1882, be so corrected as to show that the organic law was then so amended as to leave the date of meeting of the Association to the Nominating Committee.

The President appointed the following committee to nominate trustees of the Journal to fill the vacancies occasioned by expiration of term: Dr. E. D. Ferguson, of New York; Dr. W. T. Briggs, of Tennessee; Dr. J. E. Reeves, of West Virginia; Dr. T. F. Prewitt, of Missouri; Dr. George Peck, of the navy; and Dr. D. W. Stormont, of Kansas.

The committee appointed to urge the provision of commodious and fire-proof buildings for the Army Medical Museum and the Library of the Surgeon-General's Office reported that a memorial to Congress recommending that $5,000 be appropriated for the improvement of the museum had not been acted upon in the committee of Congress; but that the committee had reported favorably to an appropriation of $10,000 for the library. The report was accepted, and the committee continued.

Dr. George M. Sternberg, U. S. A., offered the following:

WHEREAS, We recognize our responsibility as guardians of the public health, and the fact that it is better to prevent than to cure disease; and.

WHEREAS, Intelligent measures of prevention require an exact knowledge of the causes of disease, which exact knowledge has not yet been obtained for a majority of the infectious and pestilential maladies which afflict the human race; and

WHEREAS, The extension of our knowledge in this direction calls for the persistent and intelligent efforts of men specially trained for such investigations, and brings no pecuniary reward; and

WHEREAS, The Congress of the United States has heretofore made liberal appropriations for scientific investigations relating to geology, natural history, the diseases of domestic animals, etc., all of which are evidently secondary in importance as compared with the subject herein referred to; therefore, be it

Resolved, That we earnestly petition the Congress of the United States to make suitable appropriations for the prosecution of scientific researches relating to the cause and prevention of the infectious diseases of the human race, to be expended under the direction of the National Board of Health, and that the permanent detail of one medical officer of the army, and one of the navy, be authorized for the prosecution of researches of this nature.

Resolved, That a committee of five members of this Association be appointed to present copies of this resolution to the Speaker of the House of Representatives, to the President of the Senate of the United States, and to the Chairman of the Committees of Public Health of the House and of the Senate.

On motion the resolutions were adopted, and the President appointed the following named gentlemen to constitute the committee: Dr. Sternberg (Chairman), Dr. Albert L. Gihon, U. S. N.; Dr. I. M. Hays, Pennsylvania; Dr. J. C. Dalton, New York, and Dr. J. E. Reeves, West Virginia.

Dr. Keller, of Arkansas, offered some resolutions on cremation, but was ruled out of order.

Dr. J. S. Billings, of the Committee on International Medical Congress, presented the following:

The Committee to which was referred that part of the President's address, relating to the proposed meeting of the International Medical Congress in the United States, in 1887, has the honor to report that it has conferred, so far as the limited time at its disposal would allow, with leading members of the Association, representing all parts of the country, and that the sentiment appears to be practically unanimous in favor of carrying out the suggestions made by the President.

The Committee accordingly respectfully submits the following resolutions with the recommendation that they be adopted by the Association:

Resolved, 1. That a Committee of seven, of which Dr. Austin Flint, the President of this Association shall be a member, shall be appointed by the President.

2. It shall be the duty of this Committee to extend in behalf of the medical profession of the United States to the International Medical Congress, about to meet at Copenhagen, a cordial invitation to have the next International Medical Congress meet at Washington, D. C., in 1887.

Resolved, 2. That the Committee shall elect its

own officers, and that, in case the invitation is accepted, it shall proceed to act as an Executive Committee, with full power to fix the time and to make all necessary and suitable arrangements for the meeting of such Congress, and to solicit funds for this purpose.

3. That the Committee shall have power to add to its membership, to perfect its organization, and that to meet the preliminary expenses of printing, postage, etc., the chairman of this Committee is authorized to draw upon the Treasurer of this Association for an amount not exceeding four hundred dollars.

(Signed.) J. S. BILLINGS,
L. A. SAYRE,
I. MINIS HAYS,
H. F. CAMPBELL.

R. W. Foster not present.

On motion the report was adopted.

Dr. J. M. Toner, on behalf of the Board of Trustees, then presented their report and the report of the editor, Dr. N. S. Davis.

REPORT OF THE BOARD OF TRUSTEES.

The Board of Trustees of the American Medical Association, for journalizing and publishing its transactions, beg leave to lay before the Association the following report of their operations for the year:

It is well known to the Association that after much deliberation, and various reports by special committees to whom the consideration of the question of journalizing its transactions had been at different times referred, finally in June, 1883,

"*Resolved*, That the interests of the Association would be promoted by the publication of its transactions in a weekly medical journal under its own control, instead of an annual volume as heretofore, provided it could be done without involving pecuniary embarrassment, or so far engrossing its funds as to prevent the annual encouragement of original investigations by its members."—JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION, Vol. 1, p. 4.

A detailed account of the plan and scope of the journal, and its probable cost per year, was given in the report referred to, as well as its place of issue named.

The place of publication, however, was determined by competitive bids from reliable publishing houses in several of the large cities, and A. G. Newell, publisher, of Chicago, being the lowest, the contract was awarded to him.

By a fortunate coincidence, the editor selected resided in the same city.

One of the resolutions accepting the report, changing the form of publication, and giving effect to its provisions and recommendations, is in the following language.

"*Resolved*, That the Board of Trustees are hereby instructed to proceed with the publication of the Journal of the American Medical Association, at as early a day as is practicable, to take the place of the annual volume of transactions, and that the duties formerly devolved upon the Standing Committee of Publication be transferred to the Board of Trustees, and that the Secretaries of the Association, during or immediately after each annual session, be required to transfer to the editor of the JOURNAL the record of proceedings, addresses, and all written reports of committees and officers, papers and contributions, that may be referred for publication, either in general sessions or in any of the Sections.

The Board of Trustees first organized at St. Paul by electing officers, and made their report recommending the establishment of the JOURNAL at Cleveland, in June, 1883, from which we just quoted.

Dr. N. S. Davis, the veteran projector, steadfast friend, and wise promoter of the best interests of the American Medical Association, was unanimously selected by the Board as editor of the JOURNAL.

The report was comprehensive, and outlined the plan upon which the JOURNAL was to be conducted, and the class of advertisements to be admitted, which has been adhered to. A constitution for the government of the Board of Trustees was drafted and adopted at the Cleveland meeting.

The rule laid down in the report relating to advertisements is in the following words: "Advertisements from all medical educational institutions and hospitals open for clinical instruction, from book publishers, pharmaceutists, instrument-makers, and all other legitimate business interests. But all advertisements of proprietary, trade-mark, copyrighted or patented medicines should be excluded. Neither should any advertisements be admitted with one or more names of members of the profession as indorsers, having their officinal titles or positions attached.

"In other words, no advertisements should be admitted which fairly contravene, in letter or in spirit, the principles of the National Code of Ethics."—JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION, Vol. I, p. 6.

This regulation is a wise restraint, tending to elevate the dignity of the JOURNAL; but it, at the same time, deprives it of a considerable revenue.

A weekly issue of 3,500 copies, containing the papers recommended by the Association for publication and original contributions, such as are usually admitted to first-class medical journals, was begun in July last, and mailed to members, subscribers and exchanges.

The number printed was slightly in excess of the number of members and subscribers, so as to have a residue on hand, and the number has consequently been gradually increased until the issue has reached 3,800.

The character and appearance of the Journal is familiar to all. That the publication of the transaction in the weekly JOURNAL form has proven more acceptable to the members than the annual volumes, is manifest.

The proceedings and papers of the Association can now reach the members within the first quarter after the meeting, and besides, the Journal furnishes six times as much reading matter during the year, including the latest medical news and progress in medicine, as was given under the old method of publication.

The enterprise was at the start something of a financial venture, and like most new departures has been more or less hampered for want of funds.

It is gratifying to find, however, that by this method of publication increasing interest has been aroused among the old members of the Association.

The remarkable increase in the income of the Association may be taken as the indubitable evidence of approbation.

This is made apparent when we contrast the total increase of the Association from annual dues of members and sale of transactions for a series of years with the past ones.

The Treasurer's account shows the following receipts for the respective years:

Namely 1877, reported at Buffalo in 1878..	$ 5,439.75
" 1878, reported at Atlanta in 1879	5,483.16
" 1879, reported at New York in 1880	3,879.34
" 1880, reported at Richmond in 1881	7,409.89
" 1881, reported at St. Paul in 1882	3,304.00
" 1882, reported at Cleveland in 1883	4,535.30
" 1883, reported at Washington in 1884	13,017.25

From subscriptions, sale of Index, and advertisements to May 5, the income for the year ending with this meeting, you will observe, shows a very marked increase of funds, nearly double that of any former year, and will be further augmented by assets due the JOURNAL, and payable at the end of this quarter.

What the amount may aggregate at the end of the year cannot now be stated with exactness.

But the editor in his clear and comprehensive report on the management and prospects of the JOURNAL to this Board, however, gives a close approximation to the amount of assets at the close of the publication year, which will appear farther on.

Dr. Dunglison reports, May 5, that the sources and amounts of income for the year 1884 on hand from last year	$ 903.95
Received during the past year from sale of Index	198.00
From members and delegates at Cleveland	5,008.75
And from the office of publication, from subscriptions, advertisements, etc	7,810.50
Total	$13,921.20
The expenses incurred in publishing the JOURNAL for the first three quarters of the year and the three first numbers of the last quarter, and already paid from the treasury on vouchers properly signed	$8,808.66½
Drawn on account of editorial work	752.12
Total amount drawn from the treasury on account of the JOURNAL, on the order of the Editor, countersigned by the President of the Board of Trustees, is	$9,560.78½

It will require about $1,800 to complete the publication of the last quarter of the JOURNAL, and there is due the editor for the year's salary $5,247.88.

The treasurer's statement just referred to shows that there remains in the treasury, May 5, 1884, $2,212.07. The assets from unpaid subscriptions, and from contracts for advertisements which fall due at the end of this quarter, and which are deemed perfectly good, will yield a sufficient sum to complete the volume.

The year will therefore, we believe, close with a surplus in the treasury over all expenses, including Editor's salary, of about $500.

The Editor's report furnishes important data to the Board, and will also give desirable information to the Association, and is, therefore, incorporated as a part of the report of this Board of Trustees to the Association. I now request that if present, the Editor, Dr. N. S. Davis, may read his report for me.

REPORT OF THE EDITOR TO THE BOARD OF TRUSTEES.

When the undersigned entered upon the discharge of his duties, and the Board of Trustees adjourned at the meeting in Cleveland the first week in June, 1883, it was understood that the actual number of members of the Association and subscribers to be supplied with the JOURNAL would not exceed 2,500, and that 1,000 extra copies would be sufficient to afford a moderate number each week to be used as specimens for inviting more subscriptions, and leave a sufficient surplus to supply any additions that would be made through the year. Consequently, Mr. A. G. Newell, successor to the firm of Tucker, Newell & Co., to whom had been awarded the contract for publishing the JOURNAL, was notified to be in readiness to commence such publication on the 1st day of July, 1883, and the manuscript for the first number was placed in his hands in time for issue at that date. But the many incidental details required the adjusting of forms, apportioning new type to the wants of medical writing, the arranging of printed mail lists, and organizing of folders, stitchers, wrappers, etc., actually delayed the first issue to the middle of July. And the same causes prevented the regaining of prompt issues on time for the first three months. These embarrassments were greatly increased by the inefficiency of the foreman of the printing department both in arranging his forms and in making the corrections marked by the proof-reader.

By the exercise of much patience, however, all these obstacles were finally removed, and the establishment secured the services of a very competent foreman, a fairly well-skilled proof-reader, and a well-drilled corps of folders, wrappers, and mailers, under whose hands the JOURNAL has been mailed with almost uniform regularity on the day of its date (Saturday of each week) for the last four or five months.

Circulation.—Before the time for issuing the fourth number it became apparent that more than 3,500 copies would be required each week, if any were to be used, either to supply extras to writers or for samples to other parties.

Accordingly, the number issued each week was increased to 3,800, and has been continued at that rate until the present time.

The first three-quarters (nine months) of the Jour-

nal year closed March 31, 1884. Up to that time the total number of names received from the Treasurer, as members having paid their dues and entitled to the JOURNAL, was 2,069.

In addition, there had been received 1,202 names of subscribers, a large part of them by *pledge*, before the issue of the first number of the JOURNAL.

In addition, further, 165 copies are sent each week to exchanges and correspondents at home and abroad, making the total regular weekly circulation at the present time 3,436, of which 3,271 are to members of the Association who have paid their dues for the current year and to actual subscribers. Of the 1,202 of the latter class, 650 have already paid their subscriptions at this office, leaving 552 still unpaid. Some remittances are being received from these daily, with a prospect that very nearly all will be paid before the end of the JOURNAL year. It is thus seen that the actual circulation of the JOURNAL has considerably exceeded the estimates made at the last meeting of your Board.

Advertising.—Coincident with the issue of the first number of the JOURNAL, a circular letter, accompanied by a card containing a scale of advertising rates, and explaining the merits of the JOURNAL as an advertising medium, was sent to the officers of medical colleges, drug manufacturers, instrument-makers, etc., soliciting patronage. As nearly all the annual medical college advertising is placed in May and June, it was too late in the season to secure more than a very few advertisements from that source. A few of the larger and better class of drug manufacturing firms promptly responded with page advertisements, payments to be made at the end of each quarter. Many offers of advertisements were received from advertising agents and business firms, but of such a character as were precluded from acceptance by the rule adopted by the Association. Still the advertising patronage has slowly increased. During the month of March, another circular letter was sent to nearly all the medical colleges in the country; and in consequence several good advertisements have been received during the last few days.

Notwithstanding the restrictions already alluded to, the amount received on account of advertisements up to March 31, was $809.50. The amount due at that date, but not paid, for advertisements during the third quarter, $1,000, and there will accrue during the fourth quarter more than $1,200, making the total from advertising department during the first year at least $3,000.

Total income first 9 months.—From the foregoing facts it will be seen, that, counting the 2,069 members whose names have been forwarded to the publication office by the Treasurer, as having each paid $5, the aggregate receipts by the Treasurer from that source up to the end of the third quarter of the JOURNAL year is $10,345. The actual receipts from subscribers at the office of publication, up to same date, is $2,293; and from advertising $809.50, making the total at this office $3,102.50, all of which has been paid into the treasury, and receipts taken ere for. This makes the *supposed* total receipts on account of the first three-quarters of the JOURNAL year $13,447.50.

In the 650 subscribers reported to have paid at the office of publication, are included 52 who have paid since the 31st of March, and 37 whose subscriptions net only $4, each on account of the deduction of 20 per cent., or $1, commissions to book and periodical dealers who procure subscribers; and 170 at the same rate furnished in one bundle to the Surgeon-General's office, for the use of the medical department of the U. S. Army, and on which there is unpaid the last half year, amounting to $340, and which will be paid at the end of the fourth quarter.

These facts will explain the difference between the nominal proceeds of 650 subscribers reported to have paid, (but 170 of which had actually paid only for the first half of the year), and the sum reported to have been actually received up to March 31, 1884.

Additional receipts to be expected during the fourth quarter.—In regard to the income that may be expected during the fourth and last quarter of the JOURNAL year, I think the $340 from the medical department of the United States Army, and the $2,000 from advertisers, may be considered entirely reliable. From the 552 subscribers who have not yet paid, there is due $2,760; which added to the other sums named would make an aggregate of $5,100. If we add this to the actual receipts of the first *three-quarters*, it will make the total income of the Association on account of membership fees and subscriptions, etc., for the JOURNAL year, $18,547.50.

Expenditures.—The total amount drawn by orders on the Treasurer of the Association and approved by the President of your Board, for the payment of publication expenses, as by contract with the printers, and for cuts, stereotype plates, clerk hire, U. S. postage bills and expressage for the first quarter was $3,152.98; for the second quarter, $2,348.24; and third quarter, $2,670.04; making a total of publication expenses for the first three quarters of $8,171.26. Estimating the publication expenses of the fourth quarter nearly the same as the third, viz.: $2,720, it would make the total publication expenses of the JOURNAL for the first year $10,891.25. There has been drawn from the treasury on account of editorial work during the first three quarters of the year $721.63. If we add this to the total publication expenses for the year it makes an aggregate of $11,612.88.

This is $1,834.62 less than the total actual receipts of the first three quarters of the JOURNAL year, and $6,134.62 less than the total receipts, with the estimated income of the fourth quarter added. If we deduct from this the unpaid balance of the $6,000 appropriated to the editorial department, namely $5,278.37, it would leave a balance or surplus in the treasury as the result of the first year of journalistic work of $1,656.25. If we make the liberal allowance of $1,000 for the necessary current expenses of the Association for the year, there will still be a balance of over $500 in the treasury.

There is a reasonable certainty, therefore, that the aggregate receipts for the year will pay all the expenditures belonging to the publication of the JOURNAL,

and leave a surplus sufficient to meet all the necessary current expenses of the Association.

JOURNALS on hand.—Immediately after the close of the first volume of the JOURNAL, we requested all members and subscribers to examine their files and inform us at once of any missing numbers, and we would supply them without additional charge. This brought a considerable number of applications, all of which were supplied, consequently if there are any whose volumes are still incomplete, it is their own fault. Owing to the printing of only 3,500 of the first numbers, and the sending out of some as sample copies, numbers two, six and sixteen of volume one are exhausted. Of the remaining numbers of that volume, there remain on hand about fifty copies of each. Of the numbers thus far issued of volume two, between two and three hundred of each have been carefully reserved to supply such new members as might come in at the present annual meeting in Washington, and desire the volume complete.

It is proper I should state in simple justice to the present publisher of the JOURNAL, that he has faithfully adhered to his contract in every particular. The paper furnished has been very uniform in quality, and every effort has been made to correct defects, whether in the skill of employes or in the lack of material, and the improvements made during the past six months have been too marked to be denied by any impartial reader. He has enlarged his room accommodations, furnished additional type as needed, and within the last few days put in an additional press. And should the publication be continued in his hands, he will cheerfully and promptly remedy any other defects and make any change in the style or arrangement of the JOURNAL that may be desired by its managers. The experience of the present year having demonstrated a fair financial basis for the JOURNAL, the editor could safely begin the next volume with two or three additional paid correspondents in Europe, and one in each of the chief medical centers in our own country. He could use a moderate sum in payment for important reporting, and for papers containing the results of original investigations. In a word, he could double the amount hitherto paid for such work, and at the same time feel some confidence that in devoting more of his own time and thought to improvements in every department of the work he would not be without a fair financial remuneration. It is thus the enterprise can and will grow in all its relations from year to year, provided there is sufficient stability in the management to make the experience of each year available for improvements in the next. That the JOURNAL has already exerted a very important influence in diffusing a better knowledge of the plan of organization, by-laws, and ethics of the Association, and in correcting errors and mischievous misrepresentations, we have the testimony of several of the most eminent men in the profession. But its proper work in these directions is only just begun.

The fact that nearly all the reports and papers referred for publication were printed during the first three months of the JOURNAL, and that there has been no lack of good original contributions during the remaining part of the time, shows that it is exerting a strong influence in encouraging more active investigations and attracting more attention; while financially it has caused more than double the number of members to pay their annual dues and retain their membership than had paid in any one of the past five years. At the same time, it has received one-third of its patronage from outside of the membership of the Association. Much the larger part of this has come from the profession located in the States west of the Alleghany mountains, where the field for the circulation of a large weekly journal is less occupied than in the New England and Middle Atlantic States.

But having stated as briefly and clearly as possible the development and status of the JOURNAL thus far, I leave the important enterprise in your hands, knowing that it will receive your most full and careful attention. All of which is respectfully submitted.

N. S. DAVIS,
Editor JOURNAL OF AMERICAN MEDICAL ASSOCIATION.

Chicago, May 1, 1884.

The editor's report, here presented, shows the financial condition of the JOURNAL to be in a satisfactory condition.

The Treasurer's report has been audited and found to correspond with the vouchers and orders of the Association upon the Treasury.

The JOURNAL has been, we believe, conducted with economy, ability and judgment, and the best interests of the Association kept steadily in view, and its dignity maintained with rare discretion.

It is confidently expected that the experience gained during the last year, with the assured increase of funds, will enable the Board of Trustees and more especially the editor to greatly improve the JOURNAL.

Greater experience in the work and a clearer comprehension of the requirements of the JOURNAL, with more trained and able contributors employed and liberally paid, and the whole available revenue of this enterprise put into the JOURNAL, will, before the end of the next year, place it in the front rank of medical periodicals.

Dr. N. S. Davis, April 11, 1884, by a letter to the Board, tendered his resignation as editor to take effect June 30, which would be at the end of the second volume of the JOURNAL.

His letter is as follows:

APRIL 11, 1884.

To the Trustees of the American Medical Association for Journalizing its Transactions:

MESSRS.:—As the time is near at hand when you are to meet for considering the important interests confided to you, and desiring to relieve you from all possible embarrassment from personal considerations, I hereby tender my resignation of the position of editor of the JOURNAL, to take effect at the close of the present volume, June 30, 1884.

Yours truly,

N. S. DAVIS.

After a very careful canvass of the best interests of the JOURNAL, including propositions for a change of the location of publication and an available and unex-

ceptionable editor, a vote of the Board with but one dissenting voice requested Dr. Davis to withdraw his letter of resignation, to which Dr. Davis makes the following reply:

To the Board of Trustees for Journalizing the Transactions;

In presenting my resignation of the position of editor of the JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION, one month since, to take effect at the end of the JOURNAL year, I was actuated by a sincere desire to be relieved from so onerous an amount of labor on the one hand, and on the other, an equal desire to relieve the members of the Board from all merely personal considerations while considering questions of future policy. But the same motives and impulses which constrained me to yield to your invitation to accept the position one year since, equally impel me now to yield to your nearly unanimous request that I withdraw the resignation tendered. I therefore defer to your judgment, and will diligently strive to make the JOURNAL better in the year to come than in that which has passed; but at the end of that time must positively withdraw from a position involving so much labor and responsibility.

Yours truly,

N. S. DAVIS,

Editor of JOURNAL OF AMERICAN MEDICAL ASSOCIATION.

WASHINGTON, MAY 7, 1884.

The Board has therefore secured the services of Dr. N. S. Davis as editor for the coming year. Bids for the publication of the JOURNAL for this year were solicited from leading publishing houses. We had bids from New York, Philadelphia, Detroit, Washington, Portland and Chicago.

The most favorable bid, however, was found to be from the present publishers. It has therefore again been awarded to A. G. Newell, of Chicago.

All of which are respectfully submitted by direction of the Board.

J. M. TONER, Prest. Board of Trustees.

Dr. J. H. Packard, of Pennsylvania, presented a minority report.

Minority Report of the Trustees of THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION, made to the Association at Washington, D.C., May 8, 1884.

In presenting a minority report to the Association, I obey a strong conviction that in no other way can I fulfil the duty resting upon me as one of the trustees of your JOURNAL. I do so in no unfriendly spirit toward my colleagues, and without in any way reflecting upon them. I have no hostility toward the present editor of the JOURNAL, whose long and eminent services in the counsels of this body are too well known to admit of even momentary question. Still less can I be suspected of a desire to hamper or weaken an enterprise in which my interest has been for the last four years most warmly enlisted, and, I think, amply shown. Perhaps I need hardly pause to deny the imputation of any personal motive, or of captious fault-finding.

From the report of the majority of the Board of Trustees, it would appear that the Association is able this year to meet the expenses incurred by it in the publication of the JOURNAL. Yet I am in possession of an official letter to me from the President of the Board, dated since the beginning of the year, in which it is stated that the editor has abstained from drawing his salary, and that we count upon his so abstaining for some time to come. Unless this statement is no longer correct I cannot but express to the Association my disapproval of such a state of affairs.

It is not, however, in regard to the financial part of the matter that I feel called upon to dissent from the report offered by my colleagues. What I am constrained to say is, that the JOURNAL has not, in my opinion, approached anywhere near the standard of what the organ of the associated medical profession of the United States should be. I am well aware that there are difficulties attending the inception of such an enterprise, but the defects of the JOURNAL are not of this kind, nor have they in any sense become less marked in the nine months of its existence. I submit that the object of its establishment was not the mere "Journalizing of the Transactions," not the spreading out of the minutes of the Association, and of the papers read before it, over a year; the object was the setting up of a strong, wide-awake, high-toned periodical, well-found in every respect, which should be a medium of communication between the members of the profession all over the United States—the non-sectional, non-partisan organ of the Association, which should enable it to more efficiently carry out the aims of its organization and maintenance. Such was certainly the scheme contemplated and advocated in the reports presented by myself, and especially in the first one, read at Richmond in 1881. It is true that at the outset there was a certain timidity in the movement, and a hesitation in striking out boldly from the shore. But the faith was there, and only needed development.

Such a journal as we require can only be carried on, I assert, by a thoroughly trained corps of qualified editors, acting together in such a way that the work should go on without a perceptible break, even if one or more of them should, in the chances of life, be disabled. It can be best done where there is ready access to large libraries, and to all the current literature of the day, and where there is constant opportunity for securing the best auxiliary work. Such contributions to its pages, like all others, should be properly and liberally paid for.

Facilities for the mechanical execution of the work are also essential, as its real success depends largely upon the accuracy of and elegance of the printing, press-work, and general make-up, as well as the punctuality of its issue and distribution.

None of these requirements seem to me to have been adequately met or possessed by the JOURNAL of the Association as heretofore conducted, and due respect for the interests of the Association compels me to state this as my sincere and deliberate judgment.

The limited time at my disposal, with many interruptions, must be my excuse for the brevity and, perhaps, the abruptness with which my views have been offered, but I trust I have made them clear.

I beg to recommend that the resignation of Dr.

Davis as editor should be accepted, and that the publication-office of the JOURNAL be transferred to some eastern city,—Washington, Philadelphia, or New York. All of which is respectfully submitted.

JOHN H. PACKARD,
Trustee.

The President decided that the majority report must first be considered.

Dr. Kinloch made the point of order that the minority report should first be considered.

Dr. A. Garcelon, of Maine, appealed from the decision of the chair, the appeal was taken and the decision was reversed.

A motion was then made that the minority report be laid on the table.

On this motion the ayes and nays were demanded; while this was pending, the Committee of Nominations offered their report, which was received:

OFFICERS ELECTED FOR 1884—85.

President, Henry F. Campbell, Georgia; First Vice-President, Jno. S. Lynch, Maryland; Second Vice-President, S. D. Mercer, Nebraska; Third Vice-President, J. W. Parsons, New Hampshire; Fourth Vice-President, H. C. Ghent, Texas.

Time and place of meeting, New Orleans, last Tuesday in April, 1885.

JUDICIAL COUNCIL.

To fill vacancy, 1886, J. K. Bartlett, Wis.

To fill vacancy caused by expiration of term of service, John H. Murphy, Minnesota; J. M. Toner, District of Columbia; W. Brodie, Michigan; H. D. Holton, Vermont; A. B. Sloan, Missouri; W. B. Ulrich, Pennsylvania; Wm. Morrow Beach, Ohio.

Secretary—W. B. Atkinson, Pennsylvania.

Assistant Secretary—W. H. Watkins, Louisiana.

Treasurer—R. J. Dunglison, Pennsylvania.

Librarian—C. H. A. Kleinschmidt, District of Columbia.

SECTIONS.

Practice of Medicine—Chairman, H. D. Didama, New York; Secretary, G. M. Garland, Massachusetts.

Obstetrics and Diseases of Women—Chairman, R. Stansberry Sutton, Pennsylvania; Secretary, J. T. Jelks, Arkansas.

Surgery and Anatomy—Chairman, Duncan Eve, Tennessee; Secretary, C. B. King, Pennsylvania.

Ophthalmology, Otology and Laryngology—Chairman, Jos. A. White, Virginia; Secretary, Eugene Smith, Michigan.

Diseases of Children—Chairman, Jno. H. Pope, Texas; Secretary, S. S. Adams, District of Columbia.

State Medicine—Chairman, E. W. Schæffler, Missouri; Secretary, J. M. McCormick, Kentucky.

Oral and Dental Surgery—Chairman, A. W. Harlan, Illinois; Secretary, J. Ewing Mears, Pennsylvania.

State Medicine—Arkansas, Jas. A. Dibrell, Sr.; Alabama, R. D. Webb; California, Dr. F. W. Hatch; Connecticut, Dr. C. W. Chamberlain; District of Columbia, Dr. Smith Townsend; Georgia, Dr. J. P. Logan; Illinois, J. H. Rauch; Indiana, E. S. Elder; Iowa, W. S. Robertson; Kansas, H. D. Hanawalt; Kentucky, J. A. Ireland; Louisiana, S. E. Chaille; Maine, T. A. Foster; Maryland, J. A. Stewart; Massachusetts, Dr. Warner (Boston); Michigan, Dr. Foster Pratt; Ohio, Dr. R. Harvey Reed; Vermont, Dr. E. F. Upham; Minnesota, Dr. Talbot Jones; Missouri, T. F. Prewitt; Delaware, L. P. Bush; Mississippi, Jno. Brownrig; Nebraska, A. H. Sowers; New Hampshire, A. P. Richardson; New Jersey, Dr. Oakley; New York, N. C. Husted; Virginia, J. Edgar Chancellor; Pennsylvania, J. D. Thomas; Rhode Island, Chas. H. Fisher; Tennessee, C. C. Fite; Texas, F. E. Daniel; West Virginia, N. D. Baker; Wisconsin, J. T. Reeve; United States Navy, Medical Director George Peck; South Carolina, G. Manning Simmons; United States Army, Jos. R. Smith (Surgeon); United States Marine Hospital, P. H. Bailache.

Necrology—J. M. Toner, Chairman, D. C.; District of Columbia, C. W. Tranzoni; Alabama, C. H. Franklin; Arkansas, W. N. Yates; California, W. R. Clump; Colorado, Chas. Denison; Georgia, J. G. Thomas; Illinois, J. H. Hollister; Indiana, J. F. Hibbard; Kansas, C. V. Motram: Kentucky, D. S. Reynolds; Maine, B. A. Ashby; Massachusetts, H. O. Marcy; Michigan, Wm. F. Breakey; Mississippi, Dr. Smythe; Nebraska, R. C. Moore; New York, J. Lewis Smith; New Jersey, Stephen Wicks; Ohio, F. E. Larrimore; Pennsylvania, I. Minis Hays; Rhode Island, W. E. Anthony; Tennessee, D. D. Saunders; South Carolina, T. T. Robertson; Texas, Dr. Harris; Vermont, C. M. Chandler; Virginia, H. M. Clarkson; W. Virginia, W. F. Van Kirk; U. S. A., W. R. Forward, (surg.); U. S. N., N. L. Bates, (med. inspector); U. S. M. H., H.W. Austin; N. H., E. E. Graves; Wisconsin, J. K. Bartlett.

Committee of Arrangements—Samuel D. Logan, M.D., Chairman; S. E. Chaillé, M.D., E. S. Lewis, M.D., Joseph T. Scott, M.D., W. G. Austin, M.D., W. H. Watkins, M.D., J. P. Davidson, M.D., J. A. G. Fisher, M.D., Geo. W. Lewis, M.D., B. A. Pope, M.D., W. C. Wilson, M.D., M. Schuppert, M.D., Geo. J. Friedrichs, M.D., F. Loeber, M.D., D. Jamison, M.D., G. K. Pratt, M.D., L. F. Solomon, M.D., J. H. Bemiss, M.D., Geo. Lawrason, M.D., G. U. Gaudet, M.D., Sam'l M. Bemiss, M.D., C. J. Bickham, M.D., Chas. Turpin, M.D., Jno. Carter, M.D., A. W. DeRoaldes, M.D., S. S. Herrick, M.D., W. S. Mitchell, M.D., E. T. Shepard, M.D., E. Souchon, M.D., T. D. Layton, M.D., T. S. Dabney, M.D., S. R. Olliphant, M.D., Edward Harrison, M.D., A. B. Miles, M.D., Joseph Holt, M.D., P. B. McCutchon, M.D., F. H. Parham, M.D., G. B. Underhill, M.D., Stanhope Jones, M.D., E. Chassaignas, M.D., R. Dell'Orto, M.D.

On motion of Dr. Brodie, the report as read was unanimously adopted.

After much discussion as to the calling of the additional names on the register prior to the call of the ayes and nays, the President decided that this list need not be called.

The Permanent Secretary then called the roll.

The minority report of the Board of Trustees was laid on the table by 191 ayes to 74 nays.

The majority report was then adopted.

Dr. N. S. Davis, Chairman of the Committee on Meteorological Conditions and their Relations to the Prevalence of Acute Diseases, read his report.

On motion, the report was accepted, with a recommendation for its publication in the JOURNAL.

Dr. Davis reported, with regard to the Collective Investigation of Disease Committee, that a proposition from a similar committee of the British Medical Association be accepted; that a central general committee of this Association, consisting of seven members, be appointed by the President to carry it into effect, with power to appoint a sub-committee in each State, either directly or through the State Societies, to correspond with the same committee of the British Medical Association, and report annually to this body; and that a sum not to exceed $300 be appropriated for the use of the general committee, to prosecute the work.

On motion, the report and recommendations were adopted.

Dr. Davis, on behalf of the Judicial Council, reported:

REPORT OF THE JUDICIAL COUNCIL.

1st. In the case of Dr. S. S. Goode, who presented credentials as a delegate from the Somerset County (Pa.) Medical Society, it was decided that said Society was not entitled to representation in this Association, for the reason that it had never been recognized by representation in the Medical Society of the State of Pennsylvania, such recognition being necessary under the constitution of this Association.

2nd. In the case of H. G. Sherman, whose registration as a delegate from the Cuyahoga County Medical Society, Ohio, was protested against, after a partial investigation the protest was withdrawn, and the registration permitted to proceed. Some facts were developed during the investigation rendering it probable that said County Society had not been, in the past, as faithful in requiring its members to observe the rules of ethics, as would be desirable if it remains a constituent of this body.

3rd. In the case of Dr. D. W. Day, which was originally adjudicated at the meeting in St. Paul, and a petition for a rehearing made by the defendant, on the ground of having new evidence to present, the Council, after an examination of all the new evidence on both sides, unanimously decide that such testimony does not justify a re-opening of the case.

On motion, Dr. C. T. Parkes, Chairman of the Section on Surgery and Anatomy, was requested to read his address by title, and it was referred to that Section.

On motion, the address on State Medicine was made the first order of business on Friday.

On motion, the Association adjourned until Friday, at 9 A. M.

FRIDAY—FOURTH DAY.

The President called the Association to order at 9 A. M.

Dr. J. C. Dalton, of the Committee on Experimental Medicine, reported as follows:

Supplementary resolutions reported by the Committee on Experimental Medicine.

Resolved, That the Committee on Experimental Medicine be empowered and instructed to add to its numbers and efficiency by the election of associate members from different States, and that it report to this Association at its annual meeting any matters relating to the subject of Experimental Medicine which may need the consideration and action of the Association.

Resolved, That in view of the attempts which have been or may be made to obstruct by restrictive legislation the progress of experimental medicine, this Association desires to express its earnest conviction that experimentation on animals is a most useful source of knowledge in medical science; that it is the means by which many valuable discoveries, both practical and scientific, have been accomplished; that its direction and supervision can be properly entrusted only to members of the medical profession, and that its restriction and prohibition by law would inevitably retard the advancement of medical science and the improvement of the medical art.

On motion, the report was unanimously adopted, and the committee was continued.

A question arose as to the report of the names for Trustees by the Committee on Nominations, as it was the duty of a special committee appointed by the President to name the Board. After some discussion, on motion of Dr. Pratt, the names presented by Dr. Ferguson, chairman of the special committee, were approved. These were the same as named by the Committee on Nominations. (See their report.)

On motion of Dr. Eugene Grissom, of North Carolina, it was agreed that in the future the Trustees should be nominated by the Nominating Committee.

Dr. Packard moved to take up the amendments offered at St. Paul, and after some discussion they were made the special order after the address on State Medicine.

The President announced that the committee on the late Prof. S. D. Gross had not been able to meet, and, on motion, the committee was continued with power and unlimited time.

Dr. Davis, of the Committee on Suggestions, in the address of the President as to the Code of Ethics, reported that no action was deemed necessary at this meeting, and asked permission on his own part to offer a resolution, as follows:

WHEREAS, Persistent misrepresentations have been and are being made concerning certain provisions of the Code of Ethics,

Resolved, That the President appoint a committee of *five*, of which he shall himself be a member, to report at the next annual meeting of the Association such explanatory declarations on the subject as they deem proper.

On motion, the resolution was adopted.

Dr. P. O. Hooper, Chairman of Committee on Nomination, stated that Dr. J. Ewing Mears, of Pennsylvania, not having been present, his name would be withdrawn as Secretary of Section on Dental and Oral Surgery; and Dr. Harlan, Chairman elect of that Section having declined, he offered as Chairman,

Dr. W. W. Allport, of Illinois, and as Secretary, Dr. E. C. Briggs, of Massachusets, which were agreed to.

On motion, the Committee on the President's address, Dr. Davis, Chairman, was discharged.

Dr. D. J. Roberts offered certain resolutions from the Section on State Medicine, which was declared not in order at present.

Dr. Roberts, Chairman of that Section, then read his address.

On motion, the address was referred to that Section.

By request, Dr. T. Antisel, of District of Columbia, was placed on Section of State Medicine, vice Dr. S. Townsend; and Dr. J. L. Cabell, of Virginia, in place of Dr. Chancellor.

The President announced the Augmented Committee on invitation to the International Medical Congress as Dr. A. Flint, New York; I. M. Hays, Pennsylvania; L. A. Sayre, New York; C. Johnson, Maryland; G. Engleman, Maryland; J. M. Brown, U. S. N.; J. S. Billings, U. S. A.

On motion, the President-elect Dr. H. F. Campbell was added.

Dr. Packard then called up the amendments on Members by Application.

The amendments referred to are as follows:

"Dr. J. H. Packard, of Pennsylvania, offered amendments to the Constitution contemplating changes in the plan of organization of the Association.

"Regulation II, Paragraph 1, to read as permanent members or members by application.

"Regulation II, after eighth paragraph add:

Members by application shall consist of such members of State or County Societies, certified to be in good standing by the President and Secretary of said societies, as shall make application in writing for admission. They shall simply have the right to receive the JOURNAL on the same terms as other members.

"Regulation IV, Paragraph 6, strike out all from "See," in line 7 to "and" in line 9.

"Regulation V, Paragraph 3, after "published" insert "in such manner as the Association may direct."

"Regulation VI, line 4, strike out 5, and insert 10. Second paragraph, lines 4 and 5, strike out all after "publication," to and including "Association," and insert "publication."

See TRANSACTIONS, Vol. 32, p. 51, 1881.

After much discussion by Drs. Toner, Pratt, Kinloch, Billings, Brodie, and others, on motion of Dr. Kinloch, the amendments were taken up for immediate consideration.

Much discussion having ensued, the previous question was called for and sustained, and the amendments as read were adopted by a large majority.

Dr. C. H. Von Klein, of Ohio, offered the following amendments:

Proposed Amendments to the Constitution, offered by Dr. Carl H. Von Klein, of Ohio.

WHEREAS, A higher grade of preliminary education among physicians, has been urged from year to year, without any action being taken, and

WHEREAS, This Association has the power to secure this much desired object—the following Amendments to the Constitution are proposed:

I.

No person who shall hereafter graduate from a medical college where literary education is not a prerequisite to such graduation, shall be eligible to be a delegate to the American Medical Association.

II.

All delegates to this Association, as a part of their credentials, shall present certificates from the County, District or State Associations they represent, showing from what medical college and when graduated, but this provision shall not apply to delegates from the Army and Navy.

These lay over for one year.

Dr. J. M. Keller, of Arkansas, offered the following:

Resolved, That in our large cities in the very near future, if not now, cremation of the dead will become a sanitary necessity.

Two years ago, after careful and deliberate thought for years on the subject, I offered a resolution at the meeting of the American Medical Association at St. Paul, embodying the idea that in the very near future cremation or incineration of the dead would become a sanitary necessity. Knowing, as I well did, that it would meet with a very strong opposition from many who had never given the subject a thought, I was not astonished to find the hands and voices of a number raised in horror at hearing it read, and, instead of asking any decisive action by the Association, I thought it best to let it lay over for a year, and, therefore, simply asked its reference to the Committee on Hygiene, thus accomplishing all I desired, to-wit: The bringing of it before the minds of the people, feeling fully confident that it needed only to be seriously thought of to secure sooner or later the earnest support not only of men of the medical profession, but thinking men and women of all professions and creeds. In order to give an opportunity for more thought on the subject, it was referred again to the same committee at Cleveland a year after, although many who would have opposed it violently when first offered, had become its advocates, and were anxious that it should be put upon its passage, that they might lend their earnest support to it.

Not only have I watched and noticed its increasing popularity with physicians, but the same is true with the masses, not only in this country, but in Europe, for only recently we find the subject warmly advocated in the British Parliament, just after it had been tested in the courts in the case of a Welshman, who for cremating his dead child, was arrested and tried, and acquitted, the court deciding that there was nothing contrary to law in the act.

Having been thus decided, the subject needs now only to be discussed in three aspects—hygienic, religious or sentimental, and economical. The custom of burying the dead contaminates the earth, its waters, and the air we breathe. Germs buried with the body do not die with it, but rather increase, and

it is claimed do not become innocuous under twenty years, if ever, and thus live on to reproduce disease and pestilence. If it be true—and there can be no question about it—that in the atmosphere of graveyards there is three-fold more carbonic acid gas in the atmosphere than away from them, what must be the extent and amount of the deadly poisons emanating from our public cemeteries, where from 20,000 to 100,000 corpses lie at all times in complete putrefaction. Take our largest Southern city, New Orleans, where the dead, if buried at all, are scarce covered with earth, and say if you can for a moment doubt the fact that most, if not all, its unhealthiness is due to the noxious exhalations constantly emitted from her thousands of decomposing, putrefying dead bodies, that are daily multiplying. Think of it, and imagine, if you can, the evils and ills being constantly engendered, every moment of time impregnating the air and water which her people breathe and drink.

How would it be if incineration were to take the place of such disposition of the dead? Instead of the constant generating disease and pestilential vapors as long as time lasts, decomposition would hardly have commenced before it would be forever destroyed, and instead of a mass of offensive putrefaction remaining indefinitely, the crematory would give back to living friends a few pounds of pure, clean, snowy ashes, to care for as their love and affection might prompt.

I am not aware that there is any expressed law or rule in any religious sect or denomination, but rather incline to the opinion that we who have favored it, and dared express our convictions, only feared that such obstacles might stand in the way of having it become the rule and custom, instead of the present horrid and repulsive and filthy one of burial, and each day I feel more and more assured that it will take but a few years for all objections to die out, when we will hear it advocated alike from Protestant and Catholic pulpits.

In the Campo Santo, the chief cemetery in Rome, and almost adjoining the church in which the last pope lies entombed, there stands a crematorium where, for years, numbers of incinerations have been made. May the time soon come when we will see one standing in lieu of each burying ground in the world. The process is but the simplest, quickest plan of reducing the corpse to its constituent elements, without leaving one vestige or mark of anything offensive or injurious to the living. It is strictly in conformity with nature's laws, and does, in a few moments, what putrefaction after burial fails to do in twenty years, if ever. Some will say that it is a relic of barbarism. No more than is our burial, for both were customs with the ancients, and equally practiced.

Ignorance and fanaticism can have no tenable objection to it because of the resurrection, for when the last trump shall sound, which will call upon the graves to give up their dead, so will the urn in as quick obedience give up its ashes—the first the putrid excrement and decay of worms, the latter its handful of white ashes.

The Great Creator will ask no man's assistance in accomplishing that work. His power, which can make the earth and sea give back their dead to life, will as surely revivify the ashes in the urn. When life ceases, decomposition begins, inexorable in its laws, and hideous and horrible to contemplate, even to the beasts of the field, in all its different phases of decay. Slow, offensive, repugnant and dangerous in its every step.

Cremation or rapid combustion dispels from death all these horrors, and strips the grave of its terrible mysteries. It quickly gives back to us all that is not offensive of our dead loved ones, to be placed, if you please, in some public temple to be built for the purpose, or else placed in urns of plain or costly, but durable material, to deposit in some consecrated niche in our own homes, there to be kept fresh and green with the cedars and the lilies, and not as custom now forces it, into the earth, away from home, exposed alike to the snows and storms of winter and the scorching suns of summer, and mayhap some day to be exhumed by the plowshare of the farmer or the spade and pick of the builder, a common but revolting scene, bound to grow more frequent as estates descend and change owners, and cities grow.

The thanks of the Society were voted Dr. Kellar, and on motion the resolution was referred to the Section on State Medicine.

Dr. Foster Pratt offered the following amendment:

That the By-laws be amended so as to provide that each Section shall nominate its Chairman and Secretary—all other nominations to be made as now, by the nominating Committee.

Laid over for one year.

On motion of Dr. Pratt, it was

Resolved, That the publishers of the JOURNAL be requested to publish, in pamphlet form, the minutes of the Association, together with its Constitution, By-laws and Code, for distribution to each member of the Association at each next succeeding meeting.

On motion of Dr. Brodie, it was

Resolved, That the Committee of Arrangements and the Secretary of the Association be requested to provide for future meetings a system of registration, whereby delegates and members can send in advance or hand in their credentials, certificates, fees, etc., and obtain their cards of membership at their convenience. Also that they shall provide for the prompt publication each day of the names of the members and delegates present.

On motion of Dr. D. J. Roberts, it was

Resolved, That the thanks of this Association are hereby tendered to the Museum of Hygiene of Navy Department of the United States.

Resolved, That this Association earnestly recommends to the United States Senate and House of Representatives, that this museum be placed upon a permanent basis, by such legislative enactments and appropriations as are justified by so important a movement in behalf of the best interests of our whole people.

Resolved, That this Association does most earnestly recommend, that a permanent and suitable

home be prepared at the earliest possible day for this museum.

Resolved, That the Permanent Secretary of this Association be directed to forward a copy of these resolutions to the Secretary of the Navy and to Surgeon-General Gunnell.

Dr. J. Cochran, of Alabama, offered the following:

Resolved, That it is the sense of this Association that it is not expedient for the Nominating Committee to nominate any of its own members for any of the offices of the Association.

After much discussion, on motion of Dr. J. B. Murdoch, of Pennsylvania, it was laid on the table.

Dr. D. J. Roberts then offered the following:

Dr. F. Pratt, of Michigan, offered the following resolutions, which were unanimously adopted at the Section on State Medicine, held May 7, 1884:

Resolved, That we earnestly urge upon Congress the importance of efficient legislation to so regulate immigration as to exclude from our soil the so-called "defective classes" of all nations.

Resolved, That the Chairman of this Section be instructed to report the foregoing to the Association, with the recommendation that it be adopted.

A motion by Dr. A. Garcelin, of Maine, to lay it upon the table was lost, and the original motion was then adopted.

On motion all the reports in the programme were postponed until the reading of the addresses.

On motion these addresses were ordered to be read by title and referred for publication.

Dr. J. Chisolm, Chairman of Section on Ophthalmology, etc.

Dr. Wm. Lee, Chairman of Section on Diseases of Children, etc.

Dr. T. W. Brophy, Chairman of Section on Dental and Oral Surgery, read the titles of these addresses, and they were referred for publication.

Dr. Toner announced that his report on Necrology had been published in the JOURNAL from time to time.

On motion his report was accepted, and the plan was continued.

On motion the secretaries of Sections were permitted to report to the Permanent Secretary.

The Section on State Medicine presented the following:

WHEREAS, There is apparently among the people a movement to secure a more thorough education of persons who offer themselves as practitioners of medicine, by demanding statutory enactments providing a standard of qualifications; and

WHEREAS, It is desirable and important that there should be uniformity in the legal standard of qualifications adopted by the several States of the Union in this behalf; therefore

Resolved, by the American Medical Association, that it is recommended to the organizations in the several States represented in this Association, that they use their influence in their respective States to secure the passage of laws that shall require all persons who enter the profession of medical practitioners to first pass a satisfactory examination touching their knowledge of medical history, anatomy, histology, physiology, animal chemistry, pathology, pathological anatomy, ætiology, semeiology, mechanical surgery, mechanism of parturition, botany, hygiene, and medical jurisprudence.

On motion, the resolutions were adopted.

Dr. C. Lester, of Pennsylvania, of the Section on Ophthalmology, etc., presented the following:

Resolved, That the Section on Ophthalmology, etc., requests the Association to consider the advisability of dividing the Section and forming two, one consisting of Ophthalmology alone, and one consisting of Otology, Laryngology and Rhinology.

It being an amendment, laid over.

The Permanent Secretary read the report of the Treasurer.

REPORT OF THE TREASURER.

The Treasurer has the honor to report a balance in the Treasury, at this date of $2,212.07. The sources of revenue during the past year differ from those of previous years, in the fact that subscription to the JOURNAL of the Association and payments for advertisements therein, have been added to the usual routine report of amounts received for annual dues. This subject, however, will doubtless enter as an interesting feature into the Report of the Trustees of the JOURNAL, and need not, therefore, be dwelt upon at this time.

In previous reports of the Treasurer, allusion was made to a prevalent misconception and misconstruction, on the part of permanent members, of that paragraph of the By-laws of the Association, which provides that membership will be forfeited after non-payment of the annual dues of three years for three successive years. Whatever may have been originally contemplated in this provision, the fact is undoubted that many of the members understand it to give them liberty to pay triennially dues which are particularly stated to be annual. Hundreds of members pay their dues but two years out of every three, and expect to resume their membership in good pecuniary standing at their option, provided they do not allow three non-paying years to elapse; in the honest belief that this single payment is all that is required of them in the By-laws. Other members of the Association contend that the assessments for two or three successive years, are alway due until all of them are actually paid, and that a single payment for an assessment for one year, where two or three years' payments are due, should be credited to the first year only, and not to the last. A resolution expressive of the proper construction of this paragraph of the By-laws, is undoubtedly a desideratum for the information of the members generally, and for the guidance of the Treasurer in his correspondence with them, so that his action may be just to the Association and in no wise ungenerous to those who may be prevented from various circumstances from punctually remitting the assessments annually due from them.

RICHARD J. DUNGLISON, Treasurer.

May 8, 1884.

On motion of Dr. Brodie, the report was received, and it was agreed that a continued annual payment is essential to continuance in permanent membership.

The Permanent Secretary read the report of the Librarian, which was accepted, and referred for publication.

Dr. J. C. Greene, of New York, offered the following, which was adopted:

WHEREAS, The first edition of the Medical and Surgical History of the War of the Rebellion was long since exhausted, and so distributed by the different representatives in Congress at the time the several volumes were issued;

WHEREAS, A large number of physicians and surgeons desire to obtain the work in its entirety, as is shown by the inquiry being so often made for it of Congressmen and others;

WHEREAS, The third volume of the Medical History has not been printed, which is necessary to complete the entire work;

Resolved, That it is the desire of the American Medical Association to have the third medical volume issued at the earliest possible date; also, that Congress be respectfully requested to issue a uniform *edition* of the work known as the Medical and Surgical History of the War of the Rebellion, at cost, including the usual 10 per cent. addition; therefore

Resolved, That the Secretary be requested to furnish a copy of this preamble and resolution to the President of the Senate and Speaker of the House of Representatives.

On motion of Dr. Wm. Morrow Beach, of Ohio, it was

Resolved, By the members of the American Medical Association, that it is important that proper legislation be had at this session of the National Congress for the ultimate extermination of the disease among domestic animals known as pleuro-pneumonia.

Resolved, That copies of this resolution be forwarded by our Secretary to the President of the Senate and Speaker of the House of Representatives.

Dr. Flint then introduced Dr. H. F. Campbell, President-elect, who addressed the Association, thanking the members, etc.

On motion of Dr. Garnett, it was

Resolved, That the thanks of this Association are due to the Hon. Frank B. Conger, Postmaster of Washington, for the courtesy he has shown in establishing a branch of his office in such close proximity to this hall.

On motion of Dr. W. Brodie, the following was adopted:

WHEREAS, It is desirable that a correct and full report of the proceedings of this Association should appear in its JOURNAL, therefore

Resolved, That the Board of Trustees of the JOURNAL be, and they are hereby, authorized to procure a stenographic report of the proceedings of each meeting.

On motion of Dr. W. J. Herdman, Michigan, it was resolved that,

Recognizing the important and valuable character of the contributions to medical science contained in the Medical and Surgical History of the Civil War, and with the view of increasing its usefulness by a wider distribution of that information than is now possible, since the edition published has been exhausted, be it

Resolved, That the members of this Association do most earnestly recommend the passage of the joint-resolution now pending before Congress, providing for the reprinting of 25,000 copies of this History.

Resolved, That copies of the foregoing resolution be furnished, by the Permanent Secretary, to the Speaker of the House of Representatives and the President of the Senate of the United States.

Dr. C. H. Von Klein, of Ohio, offered the following, which was unanimously rejected:

WHEREAS, The members of the American Medical Association are composed of all nationalities, denominations, sects and creeds, and

WHEREAS, Many of its progressive and scientific members are skeptics, materialists, etc., and

WHEREAS, The principles of the Association are to give equal rights to all its members, and

WHEREAS, The custom of opening the annual sessions with prayer, by the clergy of some denomination, is an imposition on many of the members, therefore

Resolved, That the custom of opening the sessions of the American Medical Association with prayer be abolished.

On motion of Dr. C. A. Rahter, of Pennsylvania, the following was adopted:

WHEREAS, The medical museum and library is the most extensive and valuable in the world, representing an almost incredible amount of patient labor; and

WHEREAS, A complete catalogue is necessary to the practical utilization of this wonderful collection of valuable information by the medical profession; and

WHEREAS, The present building is unsafe and wholly inadequate for the proper and safe care of this priceless collection; therefore

Resolved, 1st. That we earnestly request Congress to make provision at once for the safe and proper care of the medical library and museum.

2d. That in the judgment of this Association the necessary provision for the early completion of the index catalogue should be made, and that an additional number of the completed volumes be issued by the Government Printing Office, and offered by sale to the profession.

3d. That copies of these preambles and resolutions be transmitted to the proper Congressional Committee.

On motion of Dr. D. Leasure, of Minnesota, it was

Resolved, That this Association most solemnly protests against any of its members committing it by implication, to the endorsement of any of the many polypharmacal compounds and mineral waters thrown upon the market by private individuals or corporations, by signing certificates as to their value as remedial agents to be used as advertisements.

The Permanent Secretary read the following:

At a stated meeting of the West Philadelphia Medical Society the following resolutions, presented by Dr. John H. Musser, were adopted:

WHEREAS, The dignity, the honor, and the power for doing good of the medical profession can only be maintained by the individual members conducting themselves in relation to one another and the public, with the dignity and honor of gentlemen, and

WHEREAS, The noble and beautiful Code of Ethics of the American Medical Association is expressive of such virtuous and honorable sentiment,

Resolved, 1st. That we, members of the West Philadelphia Medical Society, look with regret and abhorrence upon the attempt of certain mercenary men to destroy those principles which for 48 years have been cherished and protected by the noblest and most honorable men of the medical profession.

2d. That we solemnly reiterate our faithfulness and allegiance to the principles maintained in the Code of Ethics which we are pledged to abide by.

3d. That we will not encourage such a travesty upon honor by consultation with the physician who stoops to alliance with quackery, or by directing students to those colleges which abide by such false principles.

4th. That a copy of this earnest expression be transmitted to the County and State Societies, and to the American Medical Association to which we hold allegiance, and to the *Philadelphia Medical Times*, and to the *Philadelphia Medical News*.

ATTEST: JAS. HENDRIE LLOYD,
Secretary West Phila. Med. Soc.

S. W. Cor. Walnut and 40th Sts., Phila., May 7,'84.

Dr. F. E. Daniel, of Texas, offered the following, which was adopted:

In consideration of the very innocent appearance and liability to deceive the ignorant and unwary, of an article of common domestic use, to-wit: The preparations of caustic potash, known as "Concentrated Lye," and "Star Potash Ball;" and in view, further, of their dangerous and death-dealing character, and the fact that many deaths and accidents occur in consequence of the want of discrimination in and restriction of the sale of such article,

Resolved, That the Association in convention assembled do earnestly recommend to the National Congress, or to the Legislatures of the several States, the passage of such laws as shall class all such articles as *poisons*, and shall require the same discriminations as to their sale as are now applied to other articles of a deadly nature.

The present Secretary presented the following for the New Jersey State Medical Society:

Office of Corresp. Secy.,
N. Jersey State Med. Soc.,
Trenton, N.J., May 7, 1884.

Wm. B. Atkinson, M.D., Sec. Am. Med. Assoc.

DEAR SIR:—I herewith forward to you a copy of the "Report on Preliminary Education," prepared by the Committee, and presented to the Society of the State of New Jersey at its annual meeting in 1883.

It was then ordered to be printed, and will come before the Society at its ensuing meeting in June next for adoption.

As it coincides with the suggestions made by your President, Austin Flint, M.D., in his address, will you present it to the Association that it may receive therefrom its sanction and approval, as requested in recommendation 4, page 6.

Yours very truly,
W. ELMER, Jr.,
Corresp. Sec. N. J. S. Med. Soc.

Report to the Medical Society of New Jersey of Special Committee on Preliminary Education, made at its annual meeting, June, 1883.

The Committee appointed at the last annual meeting of the Medical Society of New Jersey to present "a plan for putting into effect the suggestions made by the President in regard to the curriculum of medical study," respectfully report:

That they have bestowed much thought on the subject committed to them. They find it environed by many and grave difficulties. The resolution, in its full scope, would require the revision of the whole subject of medical education. For the execution of a task so extensive and radical, your committee feel that they have not the time, the facilities, nor the necessary ability; and it is apparent from the tenor of the address which gave occasion for their appointment, that the preliminary training to be required of persons contemplating the study of medicine in this State, was the matter whose importance the learned speaker desired to impress upon the Society. To this your committee propose to limit their consideration.

It is not necessary for your committee to enter upon an elaborate argument to prove the importance of the measure contemplated. It has been the theme of eloquent exhortation and discussion in our own and other societies, and it was ably and forcibly presented in the address to which this Society listened at its last anniversary. The appointment of the committee presupposes a conviction, in the minds of the constituency, of the weighty nature of the subject-matter of the address, and that the time had come for practical action to realize its wise suggestions. The duty of your committee will be sufficiently discharged by a statement, as brief as the case will admit, of the conclusions to which they have been led by the best thought they have been able to give to its contemplation.

It would be comparatively easy to define what your committee deem an essential preparation for a course of medical study, and submit such a plan, in general terms, as in their judgment would best insure it; but its practical execution must depend on the cordial coöperation of so many and so various agencies, influenced by so many and so various motives, that your committee, were they guided by their first impulses, would shrink from the formidable task. A plan, to be effectual, will require the assent and the hearty effort of the individual members of the profession, not only in our commonwealth, but in all the States of our national Union. The several medical organizations, national, state and local, must employ their power and influence to enforce and sustain individual action, and the medical colleges conform to the demand, which would then be imperative, to limit admission to their privileges to applicants having the

qualifications that the profession, by its authorized exponents, shall have determined to be necessary for the maintenance of a proper standard.

The duty of your committee is two-fold. 1st. To indicate a proper curriculum of preliminary preparation to be exacted of every person applying to be received as a medical student under the care of a member of the profession in this State; and, 2nd. To recommend suitable measures to secure such preparation.

The uses of a preliminary education to medical study are: 1st. Those which are common to all departments of intellectual labor, and are fitted to discipline the mental faculties so as to prepare them for profitable study, and their right exercise in the processes of observation, discrimination, analysis, deduction and reason; and, 2nd, those which will store the mind with a sufficient knowledge of the branches of science and learning that are cognate with, and essentially preparative to those that specially pertain to the medical profession.

No one who estimates properly the profound and intricate subjects of medical study can doubt the indispensable necessity of bringing to their contemplation vigorous minds, sharpened by habits of nice perception, careful observation, patient, untiring investigation, absorbing abstraction and concentration, a calm and imperturbable judgment, and a conscientious devotion to truth. There is no profession whose pursuit requires greater maturity or more systematic method; none, in the preparation for which there is greater need for the culture best fitted to develop these indispensable qualities.

Much as has been discussed the question of education best adapted to this kind of culture, it is now generally conceded that the curriculum of study adopted by our higher colleges and universities is that on which is to be placed the most reliance. Your committee would therefore recommend that all persons contemplating the study of medicine be advised to a preliminary college education, and that the possession of a diploma from a well-equipped college or university be regarded as the best evidence of fitness. The objection so often advanced that this course exhausts so much time and incurs so much expense as to put it out of reach of many meritorious young men, well fitted by natural endowments for the functions of the medical practitioner, is effectually answered by the consideration that the responsibilities of a physician, to whom is entrusted the care of human life, are too great to be undertaken by those who have not, or cannot obtain, the means to fit themselves in the best possible way for the duties they propose to assume. Incompetence may be tolerated in pursuits which are resorted to for mere maintenance or pecuniary profit. The consequences will inure to the presumptuous pretender, and affect the material interests of those who employ him; but it will not do here. Ours is a profession whose aim is, or ought to be, higher than mere physical subsistence or sordid pelf; and the consequences of incompetency touch the public health and life itself. He who conscientiously and from worthy motives aspires to it, if unfavored by fortune, will willingly submit to privations and struggles—themselves disciplinary and invigorating—to secure to himself the facilities he needs; and these are now, through college scholarships and educational institutions maintained at the public expense, brought practically within the reach of the laudably ambitious and deserving, who earnestly desire and seek them.

In cases where the evidence of preliminary education in a respectable college or university is not presented, your committee are of opinion that an equivalent or near approximation to it should be exacted, and that the applicant should produce a certificate of a complete course in a reputable academy or high school, in which are taught, in addition to the English, classical and mathematical branches required for admission to our most advanced colleges, intellectual and moral philosophy, rhetoric, logic, descriptive and physical geography, and the elements of physics, chemistry and natural history, including botany and zoology.

In default of either a college diploma or academic certificate, as above defined, the applicant, before being taken under the care of a physician for medical instruction, should be subjected to examination and approval by a competent censorship, appointed under the authority of the State Medical Society and composed of gentlemen of recognized capacity and scholarship, in the branches of science and learning indicated in the certificate to be required of the academic or high-school graduate.

The question now recurs, what measures shall be taken to secure the attainment of these ends.

So far as our own State is concerned, it will be indispensable that every member of every district medical society be brought into harmonious concurrence, in sentiment and action, with the measures that shall be adopted. Your committee would therefore recommend:

1st. That the State Medical Society make such amendment of its By-laws as to provide for the appointment of one or more boards of examiners, as it shall deem expedient, to pass upon the credentials of all persons contemplating the study of medicine in this State; and to examine such persons as fail to present a diploma from some reputable college or university, or a certificate of a completed course in a reputable academy or high school, in which are taught the branches specified in the foregoing part of this report, in the following branches of science and learning, viz.: English language and literature, and history; mathematics, including arithmetic, algebra and geometry; Latin language, including its grammar, and ability to translate with facility three books of the commentaries of Cæsar, two orations of Cicero, and two books of the Æneid of Virgil; Greek language, including its grammar, the Anabasis of Xenophon, and two books of the Iliad of Homer; intellectual and moral philosophy, logic, rhetoric, descriptive and physical geography, and the elements of physics, chemistry and natural history, including botany and zoology.

2d. That the State Medical Society send down to the District Medical Society a requisition to add to their By-laws a provision making it a condition of

membership that every physician, belonging to or coming into it, obligate himself to receive no person under his care as a student of medicine without a certificate of a board of examiners, appointed under the authority of the State Medical Society, that the applicant has exhibited a satisfactory diploma or certificate of the character defined in this report, or that he has been examined, with approval, in the several branches of learning and science heretofore specified.

Your committee are not prepared to give an opinion on the question whether the proposed censorship should be committed to one or two boards. Considerations of convenience and economy would suggest the institution of a board in connection with each of the District Societies, and a resolution has already been adopted by this Society, imposing on them the duty of appointing a committee of similar character, invested, however, with more limited functions. Other considerations would favor a single board, or at most three boards, one in the central and one each in the northern and southern parts of the State. Among these is the greater probability of securing the services of competent examiners, governed by a stronger sense of responsibility and less liable to be biased by local influences. It is worthy of consideration, also, whether it might not be advantageous, in constituting the examining board or boards, to select for one of its members some gentleman of acknowledged scholarly attainments not belonging to the profession.

Your Committee have felt some hesitation in recommending the extreme penalty of professional non-intercourse and disbarment from membership, in the case of physicians who may wilfully disregard the regulations that may be adopted; but so vital do they believe effective enactments on this subject to be, and so futile if put into partial execution, that they are constrained to propose them, cheerfully leaving it to the wisdom of the Society to decide upon their expediency.

But, whatever be the action taken in our own Society, as has already been intimated, nothing short of coöperation of other medical organizations, national, state and local, and of the medical colleges, can avail fully to accomplish the great result desired. Take what steps we may, if persons from other States, where like provisions do not prevail, continue to be received without evidence of preliminary preparation and, after courses of professional instruction necessarily superficial, and an examination sustained through cramming, sent forth in myrmidons, armed with diplomas by scores of medical colleges, good, bad, and indifferent, what is to hinder invasion into our borders of half-educated men from abroad, to enjoy privileges denied to our own citizens, and to prey upon the health and lives of our own people? Your Committee, therefore, recommend:

3. That the action of this Society be communicated to the medical societies of the several United States, with a request for their coöperation with this Society, by the adoption of these or similar measures to secure the ends sought to be attained by this Society.

4. That a similar communication be addressed to the National Medical Association, asking its approval and recommendation to the State Societies, with the request that it use its power or influence to induce medical colleges in affiliation with it to receive, or at least grant diplomas to no students without satisfactory evidence of the preliminary training required in the regulations herein proposed.

The foregoing suggestions and recommendations are presented by your Committee with great deference, as the product of much deliberation and careful thought. They can hardly expect that, on their first presentation, they will meet with unanimous concurrence. They are doubtless susceptible of improvement from the wisdom of the Society. By some, the requirements may be considered too exacting. Others will probably concur with the members of the Committee itself, in the opinion that the curriculum presented omits many studies that are essential to a well-rounded, liberal culture, such as ought reasonably to be expected of members of a learned profession. They have defined the minimum, not the maximum, of attainments which it should be the aim to reach.

The time is coming when mediocrity will not be tolerated. Public education has so elevated the common mind that it will not much longer be incapable of distinguishing between real science and boastful pretension; when self-assertion, plausible manners, an imposing presence, a pompous vocabulary or its opposite, coarse jocularity, and the show of learning without the substance, will cease to be the passport of popular confidence. The standard of scholarship and scientific knowledge in all the so-called learned professions must be raised if they would not fall into merited contempt. Let us see to it that the title of "Doctor," with which common parlance has invested the physician, be a deserved distinction, not a meaningless misnomer. The movement now contemplated is a step in the right direction. It may be difficult of accomplishment; but, if the profession is true to itself, in its personality and in its corporate organizations, there is no reason to despair of success. The Medical Society of New Jersey—the oldest of the sisterhood of medical societies on the continent—may appropriately give impulse to a movement which, if successful, will crown the profession with honor, and add new lustre to her ancient renown. If, unfortunately, through want of coöperation, the effort end in disappointment, she may lament the infatuation of others, while she consoles herself with the assurance of an ancient critic, that "in great attempts 'tis noble even to fail."

Respectfully submitted,

S. H. Pennington,
Wm. Elmer, Jr.,
Alex. Rogers,
Committee.

On motion, it was received.

Dr. Le Grand Atwood presented the following for the St. Louis Medical Society which, on motion, was referred to the Judicial Council.

Memorial sent up from the "St. Louis Medical

Society" to the "American Medical Association," upon the subject of medical colleges advertising.

LEGRAND ATWOOD,
JAS. M. SCOTT,
R. M. JOURDAN, } Com.

If it is reprehensible in an individual physician to resort to public advertising, it certainly is none the less objectionable in an association of medical men. It cannot be that the enormity of the offense is diminished by combination, nor can a collegiate shield justly protect from censure those who, individually, would not thus offend.

The condemnation which inevitably awaits one who advertises, cannot consistently be withheld from others equally as culpable, who are associated in the perpetuation of a precisely similar infraction.

We can but believe that honorable professors of respectable medical colleges recognize this evil, and are individually and collectively opposed to its existence and perpetuation.

There can be no doubt that the efficacy of such advertisements as are contained in college announcements, and the individual reward consequent upon public notification of professorships, has led to the unfortunate multiplication of medical schools, with consequent reduction of rates, shortening of terms, and lowering of the requirements for graduation, whereby both the profession and the public are injured.

Ambitious and deserving men, unappreciated by the community and anxious for immediate recognition and reward, observe the success of inferior physicians connected with medical institutions, and, attributing their preferment to the widespread publication of their connected specialties and professorships, establish clinics or dispensaries, advertise that they will treat the poor gratis, and in this unprofessional manner seek success. As this course renders the *individual* amenable to discipline under the Code, common justice demands similar censure and condemnation for a college faculty in like manner transgressing.

It may be taken for granted that the corps of every respectable medical school is composed of men who consider themselves bound by the requirements of the Code, and who are ready to apply its provisions in preservation of professional honor; yet the annual circular and the daily announcement of each medical college conveys to the public, far and near, individual advertisement over signature and location of a specialty, and professional proficiency in that specialty, to the injury of less favored medical brethren. And not only is this advantage thus obtained, but, by the same means, the entire faculty is glorified in its published connection with an institution of learning, in which the facilities for obtaining instruction are set forth in glowing terms, with pictorial illustrations of the college building; its amphitheater, its laboratory, its dissecting-room and its free dispensary, where the clinical professors treat so many cases of disease and perform so many surgical operations, thus violating the Code by advertising, by advertising specialties, by circulating hand-bills, and by virtually announcing that the poor are treated gratis.

Whenever the equality of rights and duties of medical men is disregarded, and the restrictions of the Code which limit and protect us in our relations to each other, to the profession and to the public, are annulled by reason of fictitious claims to license or favor, the organic law will cease to inspire respect or obedience.

After some discussion, on motion, this was referred to the Judicial Council.

The Permanent Secretary read the following list of foreign delegates:

Drs. J. W. S. Gouley, E. C. Harwood, H. D. Didama, C. C. Wycoff, Fred Hyde, N. C. Husted, G. T. Stevens, and J. C. Hutchison, New York; S. C. Gordon and T. L. Estabrook, Maine; S. J. Jones, of Illinois; E. M. Dent, and J. F. Gabriel, Virginia; C. E. Vaughn, and H. O. Marcy, Massachusetts; J. V. Shoemaker and W. H. Daly, Pennsylvania; W. A. Hobday, of Illinois; H. P. C. Wilson, Maryland; D. W. Prentiss, L. Friederich, and S. C. Busey, District of Columbia; J. M. Browne, U. S. Navy; J. S. Billings, U. S. Army; Edward Borck, Missouri; T. J. Gallagher and A. M. Pollock, Pennsylvania; C. Deveny, Illinois; C. Johnson, Maryland; Austin Flint, New York; H. F. Campbell, Georgia. Delegates to the Canadian Medical Association, W. S. Tremaine and E. N. Bush, New York; W. Brodie and H. O. Walker, Michigan. British Science Association, W. Brodie.

On motion of Dr. T. H. Nott, of Texas, the following was adopted:

WHEREAS, It has pleased Almighty God to take from us our beloved brother, J. Marion Sims, and translate him from the pinnacle of his earthly fame to a throne above, therefore be it

Resolved, That we keenly feel and deeply deplore our loss and extend our heartfelt sympathies to his bereaved family, to suffering women and to the rest of our profession.

On motion of Dr. A. L. Gihon, it was

Resolved, That a Committee of seven be appointed to report next year on the subject of the erection of a monument to Dr. Benjamin Rush, in Washington.

Committee { A. L. Gihon, U. S. Navy,
Dr. Henry H. Smith, Pennsylvania,
R. A. Kinloch, S. C.,
S. C. Gordon, Maine,
Geo. H. Rohe, Maryland,
J. H. Murphy, Minnesota,
M. H. Henry, New York.

On motion of Dr. Brodie, of Michigan, a resolution of general thanks to all committees, persons, and institutions, who had extended courtesies to the Association, was adopted.

Dr. Garcelon, of Maine, offered a resolution of thanks to the President, which was put by the Secretary and carried.

Dr. Flint gracefully thanked the Association for their courtesy and kindness.

The Association then adjourned.

WM. B. ATKINSON,
Permanent Secretary.

THE

Journal of American Medical Association.

PUBLISHED WEEKLY.

THE EDITOR of this JOURNAL would be glad to receive any items of general interest in regard to local events, or matters that it is desirable to call to the attention of the profession. Letters written for publication or containing items of information, should be accompanied by the writer's full name and address, although not necessarily to be published. All communications in regard to editorial work should be addressed to the Editor.

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SATURDAY, MAY 24, 1884.

OFFICIAL RECORD OF PROCEEDINGS.—We give a large part of the space usually devoted to papers and original contributions, to the official record of the proceedings of the thirty-fifth annual meeting of the National Association, in the present number of the JOURNAL. It contains many items of interest, and some that should receive the careful attention of every member. To the latter belong the initial steps for so changing the mode of registration at the opening of each annual session, as to avoid the very uncomfortable crowd and delay around the registration table during all the morning of the first day of the meeting. To remedy this, it has been proposed that the Permanent Secretary place the blank certificates for members and delegates to fill up and sign as the initial step for registration, within easy reach of all who may need them. The member or delegate can fill and sign the certificate carefully and enclose it with his credentials from the society he represents, if a delegate, and the $5 for annual dues, in an envelope, and pass it to the Permanent Secretary or the Chairman of the Committee of Registration, and go his way.

The registration officers enter his name on the registry, credit his money, fill up his card of membership and invitations, place them in an envelope as usual, and deposit the envelope within reach of the member at any subsequent part of the day. It is quite possible that such an arrangement can be rendered safe and practicable, and thereby obviate one of the chief annoyances connected with the annual meetings of the Association. Under the present By-laws, it is made the duty of the Secretary to read the roll of members, as registered, in open meeting, which usually occupies a tedious amount of time at a stage of the proceedings when all present are expecting to hear the President's address. For a full audience to sit and listen to the monotony of reading 1,000 or more names, is at any time tedious, and doubly so at the opening of an annual meeting, when all are expecting something of special interest. It was suggested at the recent meeting, that the names as registered, should be simply posted on bulletin boards where they could remain subject to the inspection of members during the whole time of the annual meeting.

Another subject for consideration is the amendment to the By-laws proposed by Dr. F. Pratt, of Kalamazoo, Mich., for giving each Section the privilege of electing its own officers, instead of having them nominated by the Nominating Committee.

It is claimed that the members accustomed to work in any given Section, are much more familiar with the men who would make good officers for that Section, than the Nominating Committee, constituted of one member from each State represented, can be; and were it known that promotion to the Chairmanship of a Section depended upon the choice of the members in attendance, it would induce a larger and more uniform attendance and thereby give more stability and efficiency to each Section organization. If the change is made, the time for each Section to elect its officers should be on the third or fourth day of the annual meetings, after the previous sittings have shown who are present and interested in the work of the Section, and those elected should serve during the succeeding year. While a new Chairman should be elected each year, whenever a good Secretary is found, he should be reëlected from year to year, as long as he can be induced to serve. A thoroughly competent Secretary, conversant with the rules governing the action of the Sections, will always add 50 per cent. to the practical value and interest of each year's work. Let the subject be well considered before the next meeting, when the proposed amendment will come up for final action.

UNIVERSITY OF PENNSYLVANIA.—At the annual commencement of the Medical Department of the University of Pennsylvania, held May 1, 1884, the graduating class, numbering 101, presented the University with a full-length portrait of Prof. Alfred Stille, who has filled the chair of Theory and Practice of Medicine during the last quarter of a century with signal ability.

CORRECTION.—In this JOURNAL for the 5th of April was a letter from Paris, in which the following expression occurs in the seventh line from the top of the letter: "But the class of phthises *without* bacilli are according to Prof. Sée the only true phthises." It should have been: "But the class of phthises *with* bacilli are according to Prof. Sée the only true phthises."

SCARLET FEVER SPREAD BY ICE.—The secular papers are responsible for the following statement: "There is an epidemic of scarlet fever in Gloucester City, on the Delaware River. Its rapid spread was caused by an undertaker throwing ice which had been used on a scarlet fever corpse into the street near a school. The ice was picked up and eaten by the children." Will a reliable physician in Gloucester City inform us whether there is any truth in the foregoing paragraph?

JUMPING THE ROPE.—This favorite exercise, especially among girls at school, is evidently capable of being carried to a dangerous excess. At Lima, Ohio, recently, a girl fourteen years of age is reported to have jumped the rope 250 times without interruption. In about twenty minutes after she fell into an unconscious condition, and died in a little less than three weeks.

MICHIGAN STATE MEDICAL SOCIETY.—The Twentieth Annual Session of this Society will be held in Grand Rapids, Michigan, commencing June 11th, 1884. For further information apply to G. E. Ranney, M.D., Lansing, Michigan. We would respectfully suggest to the members of this Society the propriety of so changing its plan of organization as to make it a representative body, and thus place it more in accordance with nearly all the other State medical societies, and with the National Association.

A FULL REPRESENTATION.—Thirty-four members of the profession in this city attended the recent meeting of the American Medical Association in Washington. Twenty-six were delegates from the Chicago Medical Society, and the remaining eight either delegates from the Illinois State Society or permanent members.

COLLEGE OF PHYSICIANS OF PHILADELPHIA.—At a recent meeting of this Society, Dr. J. M. DaCosta was elected President, in the place of Dr. Samuel Lewis, resigned.

OFFICERS OF STATE MEDICAL SOCIETIES.—At the annual meeting of the Arkansas State Medical Society, held at Little Rock, April 30, 1884, Dr. T. W. Hurley was elected President; Dr. W. B. Hart, Vice-President; and Dr. W. P. Gibson, of Little Rock, was reëlected Secretary.

AT the annual meeting of the Texas State Medical Society, held at Belmont, Tex., April 22, 1884, Dr. H. C. Ghent, of Belton, President; Dr. E. F. Becton, of Sulphur Springs, First Vice-President; Dr. H. H. Darr, Second Vice-President; Dr. M. Matkin, Third Vice-President; Dr. W. F. Burtof, Secretary; and Dr. F. Larendon, Treasurer.

MINNESOTA STATE MEDICAL SOCIETY.—The next annual meeting of the Minnesota State Medical Society will be held in Stillwater, on Thursday and Friday of the first week in June, 1884. A full meeting is expected.

OHIO STATE MEDICAL SOCIETY.—The thirty-ninth annual meeting of this Society will be held in Columbus, Ohio, on the 10th, 11th, and 12th of June, 1884. Dr. H. F. Sharp, of London, Ohio, is the Secretary.

SALICYLATE OF SODIUM IN PREGNANCY.—Dr. Balette, of Paris, reports four cases of pregnant women to whom *large doses* of the salicylate of sodium were given, in two of which abortion followed. The announcement would have been more satisfactory if the actual size of the doses had been stated, as moderate but efficient anti-rheumatic doses have been freely administered to many women in various stages of pregnancy without any evil effects.

SHIP OWNERS AND MARINE HOSPITAL SERVICE.—The following, from the Detroit *Lancet* of recent date, is worthy of serious thought:

"The ship owners and sailors have had bills introduced into Congress repealing the tax upon sailors for the support of the Marine Hospital Service, and ordering that the same be supported by the government. We would like to see the tax and hospitals both abolished. This entire service is an anomaly in our plan of government. There is no more reason why there should be a series of hospitals for the care of sailors supported by the government, than that the government should have hospitals supporting railroad men, or the factory operators, or any other class of laboring people. Since the government does not do this for all classes, we object to any discrimination in favor of any class. We already have a navy medical service, to care for all the sick sailors in

the service of the government. This suffices. Were it needful for the government to extend aid to any class on the water, it were best done by this service. But there is no need whatever. The sailor would be better cared for, and be trained to make a better citizen, if he were treated like all other classes of citizens. This matter is one of importance, but it will scarcely receive the attention it demands while the government department, to which it belongs, deems it of such value in enabling it to exert a powerful influence toward the accomplishment of its purposes. In short, so long as it has so large a patronage at its disposal it will have vigorous defenders; for who will not fight for his bread and butter, and find weapons of offense and defense? The reform in this matter must come from those whose interests are not interfered with by the abolition of this service."

SOCIETY PROCEEDINGS.

OBSTETRICAL SOCIETY OF PHILADELPHIA.

Thursday, May 1, 1884. The President, R. A. Cleemann, M.D., in the chair. Dr. Henry Beates, Jr., read a report of a case of

CYSTIC LEIOMYOMA UTERI,

the fluid of which contained the Drysdale corpuscle and other characteristics of typical ovarian cystoma. The early history of this case, owing to the inability of the patient to state with precision a few minor details, is somewhat incomplete, yet sufficient accuracy is available to supply a clear unequivocal clinical record, and distinctly demonstrate that the Drysdale corpuscle, where found in considerable number in fluid derived from the abdominal cavity, is not pathognomonic of cystoma ovarii.

Mrs. L., æt. 51; housewife; a mother; noticed four years prior to admission to the Philadelphia Lying-in Charity Hospital a lump in the lower abdominal region. The menopause had not yet occurred. The tumor was round, painless, and occasioned no inconvenience. Its development was comparatively slow, and not till it had attained large dimensions did it occasion constitutional derangement. When admitted the patient was markedly asthenic, and suffered from mechanical dyspnœa, gastric irritability, sub-acute proctitis and pyrexia; the temperature ranging from 99° to 100.5°.

The facies ovariana and the peculiar atrophy of the soft tissues of the supra-thoracic region, so constant an attendant upon ovarian cystoma, were present in conspicuous degree.

The notes of measurement are unfortunately lost, but an estimate of the size can be formed when it is remarked that the tumor completely occupied the abdominal cavity, everting the xiphoid cartilage and inferior ribs bulging far over the lumbar regions and extending over the pubes down and between the thighs. The circumference at its largest portion was about 51 inches. The superficial abdominal veins were conspicuous, and the cellular tissue from the mammary zone to the feet very edematous. Palpation and percussion detected and revealed signs of ovarian cyst. The fluctuation was more perceptible in the longitudinal than transverse diameter. In the sub-hepatic region a decided resistance to pressure was noticeable, dependent upon a thickening of the cyst wall. This mass was attached to the liver at the outer two-thirds of the inferior border. At the inner third there intervened a space which emitted a percussion tympany, the note being that of colic resonance. The urine afforded negative evidence. As the asthenia was so profound it was deemed advisable to tap the cyst in order to obtain an opportunity of improving the general strength and rendering ovariotomy bearable. Dr. Albert H. Smith, who had charge of the case, tapped, employing the ordinary curved trocar and canula used in tapping per rectum the urinary bladder, and withdrew twenty-seven pints of a dark, muddy-brown grumous fluid, possessing a neutral reaction, specific gravity 1018, and containing blood and par-albumen. Microscopically I found red blood-corpuscles, leucocytes, endothelium in various degrees of retrograde metamorphosis, *i. e.*, the corpuscles of Bennett, Nunn and Gluge, the ovarian cell of Drysdale, cholesterine and amorphous detritus. It did not coagulate spontaneously. These microchemical properties, coupled with the physical signs, determined a diagnosis of ovarian cyst. The grumous character of the fluid and the existence of the sub-hepatic mass inclined to the belief that we were dealing with a cyst in which carcinosis had become established, and that either metastasis to the liver occurred or there co-existed carcinoma hepatis. The idea of ovariotomy was abandoned and analepsis instituted, with the effect of improving the general condition sufficiently to enable her being removed to her home, where she remained under the care of Dr. L. Brewer Hall. In about five months the tumor had refilled, and during my absence Prof. James B. Walker, at Dr. Hall's request, tapped the second time. The fluid was clear and presented the appearance of ovarian fluid. In the winter of 1882 I tapped a third time, employing an aspirator. The gentleman assisting me inadvertently applied the exit nozzle of the air-pump to the vacuum jar, and when the trocar was introduced there occurred an inflation of the cyst. The air apparently inflated a series of variously sized cysts that were arranged circumferentially and emitted percussion notes of different pitch from this circumstance, which occasioned no evil consequences, we concluded that there existed a number of small cysts, communicating with the principal. As the evacuation of the fluid progressed the umbilical region sunk in, disclosing a circumferential mass, presenting the appearance of a wreath, as it were, underlying the abdominal parieties. This ridge could be firmly grasped and moved to a limited extent. This peculiarity determined me to carefully examine the fluid. I also had Dr. Formad examine it, and he pronounced it ovarian. The class at the University of Pennsylvania was supplied, and the ovarian cell of Drysdale demonstrated. The cyst refilled more rapidly, and I tapped a fourth time, removing a large bucketful of

clear fluid, containing the same corpuscle in greater number than previous specimens: large flakes of coagulated lymph were also evacuated. The circumferential mass had undergone great development, as had also the sub-hepatic induration. The re-accumulation of fluid was more rapid and the deterioration of health steadily progressing. Death terminated suffering about six years after the first manifestations. During the last days of the patient's life Professor Walker, in the absence of Dr. Hall, was in attendance. His letter details the mode of death and results of autopsy: "Mrs. L. died on the Sunday night after your departure. Her bowel trouble rapidly disappeared, but the symptoms of cerebral anæmia deepened, with hallucinations and convulsions until death.

"At the autopsy the tumor was found to have membranous walls over an area of nine square inches above the navel in the middle line, elsewhere the cyst wall was thick as per sample. In some localities, notably in the hypochondriæ, the wall was quite thick. Firm attachments existed over the anterior wall of the sac with the parietal peritonæum, and the intestines were carried far up under the liver and stomach, and were attached to the tumor. The liver was also attached. The entire abdominal cavity was occupied with the tumor, and it dipped into and occupied the pelvis. No attachments existed at the sides nor behind. The uterus was forced downward. One ovary, the right, was normal and attached loosely to the pelvic brim. The other is presumably occupied by the tumor. The cavity of the tumor was occupied by a brownish gelatinous fluid, resembling soft soap; it was transparent, but had a sediment consisting of detritus from the inner wall of the sac. There was but one cyst, and the entire interior was similar in its lining, being apparently undergoing erosion. The contents of the cyst measured over a Yankee bucketful. As the tumor was too immense to even contemplate removal, and as the variably thick wall was everywhere similar save in the pelvic portion, which was darkened from hypostatic congestion, I removed the uterus and the portion of the tumor immediately surrounding it, extending the section through the cyst wall." (This specimen was presented to the society.) Sections for microscopic study were prepared from different portions of the cyst wall and were all demonstrative of leiomyoma. Those from the sub-hepatic portion resembled spindle-celled sarcoma, but were clearly differentiated by the elongated nuclei and want of sarcomatous relationship of cells to capillaries. The identity of the clinical phenomena of this neoplasm with those of ovarian cyst is a matter of special attention. In the early stage a marked peculiarity consisted of the sub-hepatic enlargement and induration; a morbid resistance to pressure noticed in the inferior lumbar regions after the first tapping, and attributed to the edema, is now seen to have depended upon a thickening wall, which at that time was insufficiently developed, save in the hepatic region, to attract special attention. That all doubt regarding the nature of this neoplasm may be removed, attention is directed to the left ovary, which has undergone marked atrophy and is to be seen in the specimen. I submitted some sections to Dr. Formad, who pronounced them ovarian. The origin of the cyst from the fundus uteri is evident upon examination. With the facts before us, I think it is conclusively proved that the ovarian corpuscle of Drysdale, while a valuable aid to diagnosis, does certainly not possess pathognomonic value.

Dr. DRYSDALE regretted that Dr. Beates had not sent him a specimen of the fluid received from this tumor, especially as he had more than one opportunity of doing so. While having the highest regard for the opinion of the gentlemen who examined it, still, so many errors had been made in these investigations that it would have been a satisfaction to him to have examined it himself. But, apart from this regret, he considered it by no means proven that the cyst in question was not ovarian. The portion of tumor left attached to the uterine wall in the specimen resembled a closely adherent ovarian cyst, such as he had met with repeatedly. The little mass lying close to the uterus, described as an atrophied ovary, did not present any resemblance to an ovary, nor did it occupy the usual position of that body. In the description no reference had been made to the color of the tumor, which has an important diagnostic value, the uterine fibro-cyst being usually livid or purplish in color, while the ovarian had a white, pearly hue. It was especially in cases like that of fibro-cyst of the uterus where the importance of the ovarian cell in diagnosis was well marked. In his investigation of these tumors he had never met with the cell which he had described as ovarian. Mistakes were very easily made in the differential diagnosis of such tumors, and in fact in many cases the diagnosis could not be established except by the examination of the fluid or by opening the abdomen. For want of this examination of the fluid he had seen Spencer Wells make the abdominal section to remove a tumor which he had diagnosticated as ovarian, but which proved to be uterine. Dr. Marion Sims had sent him on three different occasions, and without telling him that they were from the same patient, specimens of fluid which he thought was ovarian, obtained from a cyst in the abdomen. Dr. Drysdale assured him that the fluid was not ovarian; but, after the examination of the last specimen, Dr. Sims still doubting, determined to operate, and found a uterine fibro-cyst. The history and all the characteristics of the tumor described this evening were ovarian, and the specimen and autopsy were not sufficient to establish the diagnosis of uterine cyst.

Dr. B. F. BAER remarked that the specimen seemed to be a section of a fibroma arising from the uterus, but it is too small to be satisfactory or to prove its origin. His personal experience has taught him the diagnostic value of the Drysdale corpuscle. When Dr. Formad reports finding this cell in the fluid removed from an abdominal tumor, he feels strengthened in his diagnosis of ovarian cyst. He has not trusted to the cell alone, but has been greatly influenced by its presence or absence in making up a diagnosis in doubtful cases. In every instance in which Dr. Formad has reported finding the ovarian

cell, operation has proved the tumor to have been of ovarian origin. He would like to ask Dr. Drysdale if he still considers the cell pathognomonic.

Dr. DRYSDALE still believed in the pathognomonic value of the ovarian cell. In his investigations he had met with but one exception to the rule, and that was in renal cysts. To prove that the cell could be relied on to establish a diagnosis he would give one or two instances where it was impossible to do this except by its aid. In a review by Dr. Harris of the "Transactions of the American Gynecological Society" in the *American Journal of Medical Sciences*, will be found this statement: "On one occasion Prof. D. Hayes Agnew gave Dr. Drysdale a fluid for examination in which he found the characteristic cell. Upon stating what he had found to Dr. Agnew, he was told that the fluid had been taken from the abdominal cavity; upon which he immediately said that the fluid must have escaped from an ovarian cyst, for it was ovarian. In this he was correct, as the cyst had a small hole in it, as if made with a punch, and the fluid had escaped as claimed." In another case, Dr. D. received a letter from Prof. Matthew D. Mann, of Buffalo, N.Y., with a specimen of fluid consisting of eight or ten drops, which the doctor stated was all that he could obtain by aspiration. The tumor had been diagnosticated by other surgeons as one of uterine fibroma, and consisted of a large, solid mass, which filled the pelvis and abdomen as high as the umbilicus. The history and symptoms all pointed to a uterine fibroid, and the patient was in such a precarious condition that an exploratory operation was considered unjustifiable. An examination of the fluid by Dr. D. showed the presence of the ovarian cell. This determined Dr. Mann to operate. He found two ovarian tumors, which he removed successfully, and the patient recovered. "Without the microscope no certain diagnosis could have been made except by resorting to an exploratory incision." These cases, and he could give many others like them, were sufficient to show the diagnostic value of the cell.

Dr. BEATES remarked that it was a matter of extreme regret to him that Dr. Drysdale did not have an opportunity of examining the fluid; it was due to the fact that the neoplasm was regarded as ovarian, and the specimens of fluid were not preserved. At the autopsy the growth was presumed to have arisen from the left ovary, and none of the fluid was kept. Later study of the specimen disclosed the amygdaloid mass situated in an atrophied membranous structure closely approximated to the uterus. The microscopic examination of this determined its ovarian character to the mind of Dr. Formad, which conclusion dissipated a doubt in my mind, and confirmed my belief of its being the left ovary. I thoroughly appreciate the strong probability of error, liable to occur in positively diagnosticating by differentiation the Drysdale corpuscle from similar bodies, as the pyoid body of Lebert, but the fact that treatment with acetic acid only had the effect of rendering the whole corpuscle very slightly clearer, and disclosed no nucleus, that ether added to the fluid and the mixture, thoroughly agitated for several minutes, had the effect of simply rendering the corpuscle paler, convinced me that the bodies were the corpuscles in question. There is, by very extended experience, developed a capacity to differentiate by a varying degree of opacity. Dr. Formad believed these corpuscles to be those of Drysdale. The striking phenomenon, if this be an ovarian cyst, is in the fact that primarily it was purely cystic, typically so, and that during the last year of its existence the cyst wall, throughout its posterior, seven-eighths assumed a myomatous development. If this did not occur, the myomatous wall must have originated at the fundus uteri, and gradually permeated the cyst. Either of those processes is almost incredible, and certainly exceptional to known clinical facts. The true uterine origin must not be forgotten. That a proper conception of the tumor may be formed, it should be compared to a large pumpkin, with a wall varying in thickness from one to three inches. For an area of about nine square inches at the umbilical region the ordinary cyst-like structure formed, as it were, a drum head. This wall is not fibromatous, but purely myomatous. Dr. Goodell has seen this patient, and diagnosticated the tumor as ovarian.

Dr. B. F. BAER exhibited a specimen of hypertrophied uterine mucous membrane. R. H., æt. 30; married twelve years; sterile; puberty occurred at age of twelve; slight dysmenorrhœa from the first, and since her marriage the difficulty has been increasing, so that during the last few years the pain has been very severe. The menstrual flow, which has always been rather profuse, especially since her marriage, has for more than a year been irregular in time and quantity; sometimes it continues two weeks very freely, when she would be so prostrated as to be compelled to remain in bed to regain strength. She complained of a severe, sharp pain in the region of the left ovary, radiating to the groin and anterior part of the thigh, and to the præcordial region and side of the head to the top-head. She had great dragging in the pelvis, and pain in the sacral region. During her periods, the mammary glands would swell and become very tender and sore. Coition had been rendered almost intolerable on account of pain during the act, and because it increased the pain in the left ovarian region and induced a sensation of nausea and faintness. She had such dread of sexual congress, that an interval of months would sometimes elapse between the acts. Her weight had decreased from 146 to 127 pounds, and her appetite and digestion were poor.

Examination showed the cervix uteri to be near the vaginal orifice, somewhat elongated and conical. The os was patulous, the body of the uterus very much hypertrophied and retroverted. The left broad ligament was contracted, and the corresponding ovary prolapsed, larger than normal and very tender to pressure. The sound indicated a uterine depth of three and one-half inches, and the cavity was large and soft. The organ was mobile. Ether was administered, the cervix dilated by means of Ellingen's dilator, and the endometrium was carefully curetted, removing a large amount of the most enormously hypertrophied mucous membrane. Nitric acid was applied. Under a regulated diet, with

rest, complete relief followed, with freedom from hæmorrhage and pain.

Dr. W. H. PARISH would like to hear the result in Dr. Baer's case after the lapse of three or four years. Two or three years ago he had reported before this Society a similar case, in which after dilation by sponge tents, he had removed a large quantity of endometric growths, and applied nitric acid. The treatment was followed by an apparent cure, which lasted for some months, after the lapse of which the previous condition returned. The same treatment followed by relief, and subsequent relapse has been repeated several times. Good microscopists have pronounced the growths benign. Dr. Goodell has, however, given it as his opinion, that it will ultimately become malignant. Dr. Parish has been gradually coming to the same opinion.

Dr. BEATES has treated a woman, æt. 33 years, who suffers from ante-flexion of the uterus, menorrhagia, and granulations of the endometrium. The microscopic appearance is benign. After treatment, by means of the curette and nitric acid, no hæmorrhage occurred for four months; the treatment was repeated, a laceration of the cervix was closed, and seven months later the patient became pregnant, abortion occurred at two and a half months, and the granulations and hæmorrhages have returned.

Dr. BAER remarked that these cases are very common, they are seen every week at the clinic. They are usually benign, but sometimes become malignant from loss of blood and a run-down condition of the system. Adhesions or some other obstacle to the free return of the venous blood from the uterus may exist, or the ovaries may be diseased, and these causes will bring on the relapse, no matter how perfect the relief may be. In many cases the cause is flexion, the effect is sterility. It is an exaggeration of a purely physiological process. It may be benign in its incipiency, but may become malignant later on.

W. H. H. GITHENS,
Secretary.

DOMESTIC CORRESPONDENCE.

THE MEDICAL ASSOCIATION OF THE STATE OF ALABAMA TO THE NEW YORK STATE MEDICAL ASSOCIATION.—At the annual meeting of this Association, at Selma, Alabama, April 9, 1884, Dr. William O. Baldwin, of Montgomery, introduced the following resolutions:

Resolved, 1. That the members of the Medical Association of the State of Alabama have watched with deep interest the progress of the struggle which for the past two years has been going on in the New York State Medical Society; between the advocates of the ancient and established ethics of the medical profession, as embodied in the Code of Ethics of the American Medical Association, and heretofore recognized and observed by all physicians of reputable standing in all the countries of the civilized world, on the one hand; and on the other hand, the advocates of the so-called "New Code," or New York Code, which in effect proposes to degrade the medical profession by opening the way for professional association with irregulars and charlatans;

Resolved, 2. That all hope of the prevalence of wise and conservative councils in the New York State Medical Society having been dissipated by its action at its recent session in Albany, no honorable course was left for the adherents of the established ethics except that which they have chosen to pursue, namely, to separate themselves from the demoralizing movement which they are unable to control, and to organize themselves into a new association for the maintenance of the honor and dignity of the profession in their State.

Resolved, 3. That in doing this these men, Flint, senior and junior, Gouley, Didama, Squibb, Rochester, Sayre, and their associates have earned for themselves the thanks of the medical profession of the whole country; and we extend to them our hearty congratulations and fraternal good will.

Resolved, 4. That in order to signalize still further our appreciation of their recent action, a copy of these resolutions, with the greetings of this Association, be forwarded by our President to Dr. H. D. Didama, of Syracuse, the President-elect of the New York State Medical Association, wishing them prosperous fortunes and abundant success in the further development and fruition of their noble work.

Resolved, 5. That a copy of these proceedings be also forwarded to the *Medical News* and *Gaillard's Medical Journal*, with a request that they be published.

NEW YORK STATE MEDICAL ASSOCIATION.—The council of the New York State Medical Association receives with gratification the greeting of the Medical Association of the State of Alabama.

Though conscious of integrity of purpose in founding our new Association, and with full faith in the wisdom and utility of its establishment, still words of encouragement and approval from those who view the contest from afar are specially cheering.

It is the desire of the council, by unanimous vote, that the thanks of the New York State Medical Association be sent to the Medical Association of the State of Alabama for the resolutions relating to the organization of the New York State Medical Association, and to the protection of the honor of the profession in the maintenance of the National Code of Ethics.

Done at the session of the Council, held May 7, 1884.

E. D. FERGUSON,
Corresponding Secretary.

THE Medical College men in Cincinnati object to any law which will compel the re-examination of their graduates by gentlemen unconnected with any college.

THE Medico-Chirurgical College of Philadelphia lost by death two members of its faculty during February, viz., Dr. Frank O. Nagle, of typhoid fever, and Dr. George P. Oliver, of apoplexy.

NECROLOGY.

Byford, William H., Jr., M.D., was born January 21, 1850, at Mount Vernon, Indiana; died at his residence in Minneapolis, Minn., October, 1883. He was the son of Prof. Wm. H. Byford, of Chicago, Ill. His early boyhood was spent in Evansville, where his father removed during his infancy.

In the fall of 1857, the family went to Chicago, Ill. There he attended private and public schools until his fourteenth year, when he was sent to Racine College. After remaining two years in the primary department of that institution, he went to Berlin, Prussia, to complete his education. Besides his regular course of instruction there, he acquired a thorough knowledge of the German and French languages under the supervision of Dr. Doebbelin, with whom he visited the Exposition at Paris, during the year 1867.

Leaving Berlin in 1868, he took an extensive tour through Europe, returned home to study law, and was admitted to practice in the courts of Illinois in the year 1870. Soon after entering the practice of law, he brought upon himself a slight pulmonary hæmorrhage by over-exertion in a gymnasium. This was the first of a series of such attacks, which brought prostration, and compelled him to give up his profession, and travel in the South; and finally to settle in Denver, Colorado, where his health so improved that he was able to study medicine with Dr. Denison during the last year of his residence there. He then returned to Chicago, entered the Chicago Medical College, and graduated in the spring of 1878. But the climate of Chicago soon began to develop his pulmonary troubles, which led him to remove to Faribault, Minnesota, with the hope that the dryer and more invigorating climate of that State would better agree with his condition. But the long rides, great exposure and unavoidable irregularities that attend the duties of the physician in small towns, rendered it impossible for one of his infirmities to continue in active practice there.

About this time the prosperous and already populous city of Minneapolis, with its brilliant outlook, attracted his attention, and he decided upon it as his permanent home, and removed there in October, 1881.

Before leaving Chicago he gave evidence of the solid acquirements and sound judgment which afterward showed themselves as leading qualities in the practice of his profession. In Faribault he became distinguished among his medical friends for his clear insight into intricate cases, and the steady confidence with which he inspired his associates in consultation.

His popularity there was very gratifying to his friends, and his patronage was limited only by his physical inability to attend his numerous calls.

While in Minneapolis he was brought prominently into notice by those same qualifications which had marked his short professional career in Southern Minnesota, and peculiarly exhibited his aptness in the work he had undertaken.

He accepted the chair of Physical Diagnosis from the trustees of the Minnesota College Hospital, and gave the greatest satisfaction in that position.

He was a member of the Society of Physicians and Surgeons, and of the State Medical Society, at Minneapolis. F. A. Dunsmoor, Minneapolis.

BOOKS RECEIVED.

Tuke, D. H. Influence of the Mind upon the Body. H. C. Lea's Son & Co.

Billings, F. S. Relation of Animal Diseases to Public Health. Appleton & Co.

Clouston, T. S. Mental Diseases. H. C. Lea's Son & Co.

Roberts' Practice of Medicine. Fifth Edition, P. Blakiston Son & Co.

Woodhead, G. S. Practical Pathology. H. C. Lea's Son & Co.

Heath, Christopher. Injuries and Diseases of the Jaws. Third Edition. P. Blakiston, Son & Co.

Report State Board of Health of Connecticut, 1883.

Chesney, J. P. Shakespeare as a Physician. Chambers & Co.

Quinan, J. R. Medical Annals of Baltimore.

Transactions Medical Association of the State of Missouri.

Chapman, H. C. History of the Circulation of the Blood.

Corning, J. L. Brain Exhaustion. D. Appleton & Co.

Weakas, E. Post-Nasal Catarrh. P. Blakiston, Son & Co.

Hamilton, F. H. Medical Ethics. Bermingham & Co.

Beard, G. M. Sexual Exhaustion. E. B. Treat.

Medical Directory of Philadelphia, 1884.

Whitla, Wm. Pharmacy, Materia Medica and Therapeutics. London: Henry Renshaw.

Official List of Changes in the Stations and Duties of Officers Serving in the Medical Department United States Army, from May 10, 1884, to May 16, 1884.

Wales, P. G., First Lieutenant and Assistant Surgeon, assigned to duty at Old Fort Colville, Washington Territory, until further orders. (Par. 3, S. O. 58, Headquarters District of Columbia, May 7, 1884.)

Wilcox, Timothy E., Captain and Assistant Surgeon, assigned to duty at Washington Barracks, District of Columbia. (Par. 2, S. O. 90, Headquarters Department of the East, May 10, 1884.)

Moseley, E. B., Captain and Assistant Surgeon, assigned to temporary duty at Vancouver Barracks, Washington Territory. (Par. 6, S. O. 59, Headquarters Department of Columbia, May 8, 1884.)

Hubbard, Van Buren, Major and Surgeon, relieved from further duty at Fort Stanton, New Mexico, and ordered to Fort Bayard, New Mexico, for duty. (Par. 3, S. O. 96, Headquarters Department of Missouri, May 12, 1884.)

Waters, William E., Major and Surgeon, ordered to report for temporary duty to the commanding officer at Plattsburg Barracks, New York. (Par 4, S. O. 90, Headquarters Department of the East, May 10, 1884.)

List of Changes in the Stations of Medical Officers, U. S. Navy, for the Week ending May 17, 1884.

Kindleberger, D., Medical Inspector, to be Fleet Surgeon of Pacific Station.

Leach, Philip, Assistant Surgeon, detached from United States steamer "New Hampshire," and ordered to Naval Hospital, Chelsea.

Bertolette, D. W., passed Assistant Surgeon, detached from Naval Academy, and ordered to Practice Ship "Dale."

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THE AMERICAN MEDICAL ASSOCIATION

AND OF ITS SEVERAL SECTIONS, 1884-5.

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Dr. C. H. A. Kleinschmidt, Washington, D. C.

Place of meeting, 1885, New Orleans, La.; Time of holding meeting, last Tuesday in April.

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ASSISTANT SECRETARY.

Dr. W. H. Watkins, Louisiana.

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Journal of the American Medical Association.

EDITED FOR THE ASSOCIATION BY N. S. DAVIS.

PUBLISHED WEEKLY.

VOL. II. CHICAGO, MAY 31, 1884. NO. 22.

ORIGINAL ARTICLES.

GUN-SHOT WOUNDS OF THE SMALL INTESTINES.

BY CHARLES T. PARKES, M.D., PROFESSOR OF ANATOMY IN RUSH MEDICAL COLLEGE, CHICAGO, ILL.

[Address of the Chairman of Section on Surgery and Anatomy.]

MR. PRESIDENT, AND GENTLEMEN OF THE AMERICAN MEDICAL ASSOCIATION:

The subject-matter of the remarks to be presented this morning was suggested to me by an article published in the *British Medical Journal* in 1882, from the pen of "that good man among men, and great man among doctors," J. Marion Sims.

The article in question was an appeal for operative interference in penetrating gun-shot wounds of the abdomen, in lieu of the "expectant treatment" so universally accepted and adopted by the profession, and which, in a few seemingly well authenticated instances, has led to recovery.

The appeal was uttered in behalf of the vast majority on the side of fatality attending these cases, and was based upon the deductions to be drawn from the recoveries following operations for diseases affecting the viscera of the abdomen and pelvis, during which the most terrible injuries have been inflicted upon the contents of these cavities—the peritonæum exposed for hours, as well as brought in contact with all kinds of foreign and usually irritating substances.

It is scarcely necessary for me to affirm in your presence the fact that, with few exceptions, the older writers and surgeons advocate the "expectant treatment" in the management of these injuries, while the younger writers and surgeons favor operations, pinning their faith upon the wonderfully favorable results attending the practice of Listerism, the purest of antiseptic surgical methods.

During the past few months I have instituted and carried out, with the valuable assistance of Mr. J. McDill and Drs. Anthony, Freer and Bolles, a series of experiments for the purpose of ascertaining the results to be obtained by immediate operations after these wounds, with the hope that the relation of the attending circumstances and events would be interesting as well as useful, by adding to the data now in our possession other data, from which may be determined more intelligently the course of action to be adopted when these cases come under our charge for treatment.

No attempt will be made to review the great question of penetrating gun-shot wounds of the abdomen, which would lead me beyond the scope of the paper. Nothing but a fair recital of the history of the experiments, with some application of the conclusions to be drawn therefrom, will be undertaken. With this intent in view, there will be presented to you the accompanying phenomena, the manner of treatment and results of thirty-seven intentional gun-shot wounds of the abdomen, confining my attention entirely to my own observations, and exhibiting to you such specimens as I have been able to preserve, taken from the animals; both of those which died, and of those which were sacrificed, after recovery, to obtain the specimen. Experiments of like nature have been made upon animals by very many surgeons, previous to the application of their convictions of the necessity of certain procedures to relieve disease or the effects of injury in the human body.

No preparation of the animals selected for experiment was made, either as to choice of physical condition or surrounding circumstances, except that they were anæsthetized previous to being hurt. The wounds were produced by the ordinary Smith and Wesson revolver of 22, 32, 38 and 44 caliber, and by the 22 caliber rifle. The shots were given at short range, so the damage done by the bullet fairly represents the injury met with, either in military or civil practice, as the results of shots from the firearms now in use.

At first, no attempt was made to give a definite direction to the course of the bullet, other than that it should perforate the abdominal cavity. The results soon confirmed the fact so well known, that the larger number of patients suffering from such wounds never come into the hands of the surgeon, their injuries proving rapidly fatal.

This ending, we can readily understand, must be a common one, when we bear in mind the construction and nature of the viscera contained in the cavity, especially their great vascularity, having vessels of immense size supplying them with, and carrying away from them, the blood necessary for their nutrition and the performance of their special functions; not to mention the main systemic artery and vein coursing through the cavity in a position rendering them readily liable to perforation, death following speedily.

It was also soon ascertained that a severe perforating and lacerated bullet wound of the viscera, such as of the kidneys, of the spleen, and of the pancreas,

could not apparently be treated successfully in any other way than by an absolute removal of the injured organ; and notwithstanding the reported successful removal of almost every important organ of the abdomen by one surgeon or another, the conclusion was reached that some of these organs must be left *in situ*, in order that the functions of life may be carried on.

Hence we were compelled to exert such control over the course of the missile, as to have it produce a wound of the nature of those likely to come, and actually coming, under the care of the surgeon; so that the injuries became those confined to perforations and injury of the intestinal tube, with occasionally the injury of some of the larger special organs.

It will not be amiss to recall to your minds, very briefly, some of the triumphs of abdominal surgery, and more especially to impress the fact that shot wounds of the cavity and contents present many questions of prime importance which are not met with in, and do not complicate, ordinary operations for disease or injury with any free, external wound.

The removal of the spleen for acute wounds nearly always results in recovery; so also one kidney has been removed successfully, either for disease or injury, often enough to place the operation of nephrectotomy among the list of justifiable undertakings.

Again, wounds of the intestinal tube of all degrees of severity, up to complete division by the resection of portions of the entire caliber thereof, have been successfully treated by surgeons, as is proved by the experimental researches of Dr. Traverse, the eminent Prof. S. D. Gross, Dr. Bell, and others, and confirmed by the experience of many surgeons during operations upon the human being for diseases of these cavities. Still, in each of the examples mentioned, the circumstances were entirely different from what is found present in perforating gun-shot wounds of the abdomen. In the former, the peritoneal cavity was clear of blood and other extraneous substances; the prevention of their entrance entirely under the control of the operator. In the latter, blood in large amounts was always found present; and the peritonæum was smeared with the contents of the intestinal tube, necessitating prolonged efforts to secure a cavity clear of all hurtful substances. Of necessity, the latter cases would be least likely to escape the probabilities and dangers of subsequent inflammation of the serous membrane.

Primary resection of portions of the intestinal tube, or entire removal of separate organs, are operations comparatively easy of performance, and are not necessarily attended with any damage to or exposure of any other portions of the abdominal cavity, outside of the immediate proximity of the site of the operation.

Extravasation and hæmorrhage should be entirely prevented and controlled; and the peritoneal sac can be maintained perfectly clean during the time of, and after, all the procedures required by the operation.

After gun-shot wounds, besides the resection or removal of any special organ required, there is great shock, and prolonged manipulation is necessary to obtain a proper cleanliness.

The recital in detail of each experiment would be tiresome and occupy too much time, so that your attention will be called only to the more important facts and circumstances determined by them.

There will be published with the paper a somewhat extended account of each experiment, from which individual inferences may be drawn. In addition, a short *résumé* of the entire work will be given further along.

First comes the question of hæmorrhage and damage to blood-vessels, as this is primarily the most common and certain cause of death, and demands the surgeon's first attention. In its excessive amount, occurring rapidly and suddenly, is to be found the explanation of the cases which are immediately fatal. This result will surely happen when the largest arterial trunks are severed by the bullet; further, its copiousness and persistency of flow, even when none but very small blood-vessels are divided, involve a matter of serious concern, if not a fatal issue, either from the amount of blood lost, or in predisposing to septic processes from blood decomposition.

There is a remarkable persistency in the flow of blood following the severance of vessels in the abdominal cavity, perhaps dependent upon the laxity of the tissues through which these vessels course, the absence of pressure from surrounding soft parts, and the lack of the peculiar influence of the atmosphere, either from its weight or clot-producing power.

When the abdomen is opened immediately after the transit of a bullet, its cavity is found to contain a large amount of blood, the quantity, of course, being in proportion to the size of the vessels wounded, but always a disproportionately large amount, no matter what their caliber; further, the flow is still going on from vessels of all sizes. There seems to be slight disposition to the formation of an obstructive clot in the mouths of the smaller ones, and slow retraction or contraction of the walls of the larger.

Bleeding stops only when the heart ceases to beat in a faint from excessive loss, or when the amount of blood is so large that by its bulk, and weight, and distension of the abdominal walls, it makes pressure sufficient to occlude the open vessels.

The conditions are very quickly altered after air is admitted through the abdominal section. Clots rapidly seal up the smallest vessel; the smaller arteries spurt less forcibly and soon cease beating; the larger ones contract and retract, just as occurs in the wounds of soft parts in other regions of the body. This is in accordance with, and corroborative of the experience in hæmorrhages occurring in abdominal surgery in the human being. Few of us have failed to see cases like this: a patient dies suddenly, with all the symptoms of acute prostrating hæmorrhage; post-mortem examination shows the abdominal cavity filled with blood; the blood is carefully cleared away in the search for the source whence it came; and when this is found, it is a matter of astonishment that such a vast amount of blood could come from so small a vessel. Perhaps it is a small vein of the ovarian venous plexus, or a minute vessel in the thin-walled sac of an extra-uterine fœtation, or the partially closed vessels in the shrunken stump of a

recently removed ovarian or other tumor, or some recently divided adhesions, all of them vessels which, in any other part of the body, would be no item of concern to the surgeon, or need any of his special care to prevent bleeding from them.

The lesson taught by these facts is of imperative importance in all operations upon these cavities; and even if mastered, loses nothing by reiteration. Excessive hæmorrhage being certainly the principal cause of speedy death in severe gun-shot wounds in this region of the body, where evidences of its presence are plainly exhibited, there can be no hope whatever of saving the lives of any of the wounded except by immediate abdominal section. This alone, by admitting air quickly, staunches the fast flowing current, and gives time for the application of the ordinary rules of surgery for the prevention of hæmorrhage.

In order to be safe from subsequent trouble, every divided blood-vessel must receive the surgeon's attention, occluding clots must be thoroughly sponged away, and in their stead must be placed the ligature or the sear of the actual cautery. If left without this restraint, and the abdominal opening be closed, the same conditions are restored as existed previous to the section; and as reaction comes on, bleeding will surely recur, and in large amount, leading to death from this cause alone, or furnishing a frequent source of septicæmia.

This fact again is corroborative of the experience of ovariotomists, the most successful being those who take the greatest pains to staunch all bleeding before closing the abdomen.

Following a resection of three or four inches of bowel and a ligation of two large subdivisions of the mesenteric artery wounded by the bullet, there occurred a mortification of several inches of the entire intestine above the site of resection. The mortified part corresponded with the distribution of the arteries wounded and ligated. This assuredly was an important fact to know, if at all likely to occur as the result of wounds of these arterial branches; even its accidental occurrence is a circumstance to be remembered. Its occurrence would surely add largely to the gravity of the cases in which it happened, probably necessitating a resection of a portion of the intestine corresponding to the area of distribution of the wounded vessel. The great freedom of anastamosis between the mesenteric arteries rather argues against their wounds being followed by any such hazardous result; still, the case recorded above required explanation. Two experiments were performed in order to determine whether destruction of the arteries alone was sufficient to lead to such mortification.

Both demonstrated that a closure of two or three of the largest subdivisions of the main mesenteric vessel was not in itself sufficient to produce death of the portion of intestine supplied by them. The experiments were as follows: an animal was anæsthetized, and the abdomen opened. A sufficient length of bowel was drawn through the opening to allow of the ligation of two large sets of vessels adjoining each, the ligatures including vein and artery. The parts were returned to the abdomen and the latter closed. At the end of thirty-six hours the wound was reopened. No very noticeable change was found in the intestine; pulsation had returned in the ligated vessels beyond the ligature. The external wound was again closed. The animal recovered in a few days so as to be as lively as ever.

A second animal was etherized, and a ventral section made. Three large vessels were ligated (veins and arteries), before their division into any branches. These three vessels lay parallel with each other. A ligature was also thrown around the anastomosing branch near the intestine which connected with a fourth larger vessel. There followed immediately very marked whitening of the bowel. The parts were returned and the wounds closed. The animal recovered promptly from the effects of the ether and the immediate effects of the operation.

It remained quite well for six days, when it grew ill. The wounds were reopened. Pulsation had returned beyond the ligature. There was no sloughing or mortification of the intestine. It was congested slightly and seemed paralyzed, and was of wider caliber opposite the distribution of the ligated vessels; this was the only change. There was a great deal of very offensive matter in the peritoneal sac, and notwithstanding the high grade of inflammation, there was no adhesion of intestinal folds except at one point. Here there was found a perforation of the intestine. Out of the opening there protruded a piece of wood which, upon being pulled out from the cavity of the intestine, was found to be four inches long, and connected with a large mass of twine. This had evidently been swallowed by the animal, and had gotten along safely enough until it reached the inactive portion of the tube corresponding to the seat of operation, where it was forced through the tube by the strong contractions behind it. Unfortunately, the animal was killed by the ether during the examination. Aside from this accident, the animal had a good chance of recovery.

The complication of a complete resection of the bowel, with a ligation of two or more vessels, is the only explanation to be given of the case where mortification occurred. The experiments prove that such result does not follow simple closure of the vessels by ligation.

The second item to be considered refers to the course of the bullet and the character of the damage done by it. Nothing can possibly be more uncertain and erratic than the track of the missile through the body. A contracting muscular fiber, an edge of fascia, the elasticity of the skin, a surface of bone, or a distended knuckle of intestine, each and all of these at times present obstruction sufficient to divert it from the direct line of its flight. It is certainly astonishing what very extensive and severe lacerations of the intestine are produced by so small a bullet as one of caliber No. 22, Fig. 1; the entire circumference of the bowel at some points being mangled beyond recognition; again, it is equally surprising how minute are the perforations made by the large No. 44, Fig. 2. As a rule, the larger the calibre of the bullet the larger the wound.

Figure 1.

An estimate of the direction of transit, based upon the points of entrance and exit, is purely conjectural, and furnishes no standard whatever by which we may judge of any supposed injury to any organs known to lie in such course. In one experiment, the bullet made four openings through the abdominal walls, and did no damage other than contusion of two knuckles of the small intestine and gouging the serous membrane.

The animal had a remarkably deep furrow along the course of the "linea alba." The bullet entered the right side of the abdomen obliquely, two inches from the mid-line, perforated its walls, and coursing to the left, furrowed the peritonæum in its passage; was evidently deflected outwards, immediately before reaching the linea alba, by a knuckle of intestine, which it contused slightly.

Here it made its first exit through the walls, passed to the left side of the mid-line, again perforated the abdominal walls, and, furrowing the peritonæum upon the left side, finally made its second exit through the abdominal walls three inches to the left of the linea alba. Near its place of final exit, a second knuckle of intestine was found badly contused. The contusion was so severe and extensive that it was thought best to resect a length of one inch. The animal recovered.

In a second instance, the bullet entered the cavity about two inches to the right of the linea alba, on a line with the umbilicus, with a direction upwards and to the left side. It made its exit nine inches to the left of the mid-line, and just at the lower edges of the last rib. On opening the abdomen the stomach was found greatly distended, entirely concealing the other viscera from view, and presented two large perforations in its walls about two inches apart, from which some blood, mucus, and food were found running into the peritoneal sac. The wound to the right, in the stomach walls, was the smaller, and situated directly opposite the entrance perforation in the abdominal wall, having the same direction. The wound to the left in the stomach walls (two inches to the left) was the larger, very ragged, and had evidently been made by the bullet deflected forward at its first entrance into the stomach. After leaving the stomach the bullet impinged upon the inside of the abdominal walls just to the left of the mid-line, and then, instead of perforating them at that point, was again deflected upwards and to the left, merely furrowing the peritonæum along the remainder of its course to the point of exit mentioned. The wounds of the stomach were inverted, as it were, into the cavity of that organ, by bringing its peritoneal surfaces surrounding the wounds in contact with each other by means of the continued catgut suture. The abdomen was carefully cleansed of blood, etc., and the wounds in the walls closed in the ordinary way. The animal speedily recovered from the injury, without any uncomfortable symptoms. During recovery from the effects of the ether, the animal vomited considerable quantities of blood, giving an additional evidence of the perforation of the stomach.

There were two cases where the bullets perforated the abdominal walls, and in their transit did no injuries to the viscera, in which the points of entrance and exit were five and six inches apart. In each instance the only damage done was a furrowing and laceration of the peritonæum along their entire courses, the blood from the track of injury falling into the abdominal cavity. In one experiment, the bullet failed to penetrate the abdominal walls and was subsequently dissected from between the muscles. On opening the cavity, quite a rent was found in the spleen opposite to the seat of external bullet wound, from which blood was freely flowing. There was neither abrasion nor perforation of the peritonæum. This case may suggest the probable cause of death in some fatal cases from non-perforating wounds. The laceration was evidently caused by concussion alone.

Other instances might be cited to illustrate the exceedingly great uncertainty as to the course taken by the bullet, and as to the organs probably impaired. They would also confirm the possibility of perforations of the walls without accompanying injury to the contents of the abdomen. Still, no instance was shown of failure to produce a wound thereof when the bullet's course lay among the intestines. Their safety followed deviation by glancing.

The wounds of the intestine may be many in number and situated very near to each other (Fig. 2) so

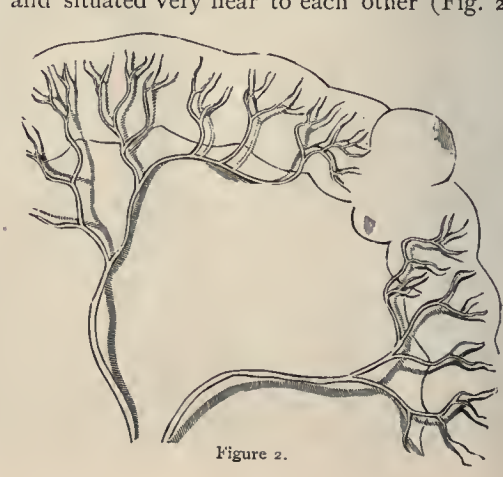

Figure 2.

that one resection including all the openings will constitute the only operation that furnishes relief.

Again, the openings may be few in number and widely removed from each other; and if each wound is large, and the damage to the tube extensive, such as is usually produced by a 32, 38 or 44 caliber bullet, three or four resections are necessary. The latter are the most difficult cases to manage and most fatal in their results. The position of the points of entrance and exit of the bullet in the intestine is subject to immense variety, even in simple cases. It may involve only the top of a knuckle of intestine, merely opening the cavity thereof. The points may be so near each other that only a half inch or less of intestinal wall separates them from each other. (Fig. 1, a.) The bullet may merely cut off the mesenteric junction opening into the cavity more or less freely. The intestine is often perforated transversely near the middle, or longitudinally; in the latter case the bullet, entering at one point, courses along in the cavity of the tube for some inches, and then makes its exit.

All of these varieties depend upon the situation of the intestinal folds with reference to each other at the time of the transit of the bullet. One case showed 10 complete perforations in 18 inches of length of the ileum. Fig. 3.

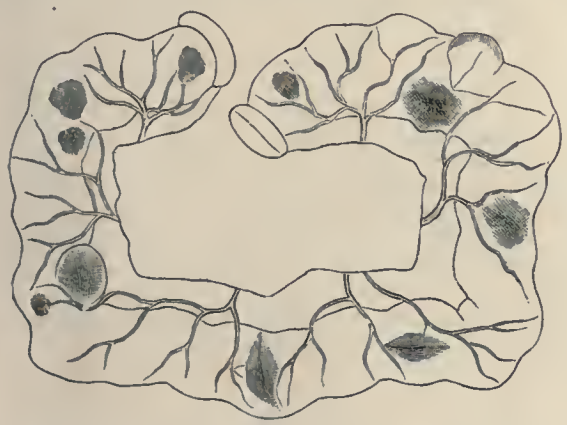

Figure 3.

Extravasation of the contents of the tube was present in every instance where there existed the slightest degree of perforation. These contents were forced out into the peritoneal cavity, or on to the surface of the intestines, if the wound was large, by the bullet itself, and the normal tonic contractions of the bowels; and, if small, perhaps by the latter alone. This facility of extravasation agrees with my experience in wounds of the intestine in the human being. I have personal knowledge of two instances in which the medium-sized aspirator needle was employed to relieve tympanitic distension of the tube, with success so far as getting rid of the gas was concerned, and giving great temporary comfort to the patient. Death ensued from the disease. Post-mortem examination in each case demonstrated the presence of fæcal extravasation at the seat of the needle puncture. It would not be an arduous task to collate instances of this accident in the practice of others, where this plan has been adopted. It is difficult to understand how any other result could follow a perforation, if there be contents at the seat of the puncture, when we remember how strong and constant is the action of the circular muscular fiber. It is stated that the protrusion or eversion of the mucous coat, which ensues very rapidly after complete division of the walls, acts as an immediate stopper to wounds of small size, say one-eighth of an inch in diameter. This may be true in incised wounds, but it was not shown to exist in a single one of the several hundred perforations coming under my inspection as made by the bullet. The latter tears away and lacerates the parts through which it passes, and perhaps paralyzes the muscular fibers in its immediate neighborhood, but whatever the cause, there was no instance in which the eversion of the mucous membrane was sufficient to prevent extravasation.

Recognizing the very deleterious influence of this material upon the peritoneal membrane, this fact of the great certainty of extravasation adds another point to the argument in favor of abdominal section in these cases, as furnishing the only means by which this source of trouble can be absolutely eliminated.

As part of the extravasated material from the wounds of the intestine, it was an exceedingly common thing to find intestinal worms of all kinds, and in large numbers, protruding from the rents or free in the serous cavity.

In the treatment adopted during these experimentations, it was found necessary to make an extensive external incision, freely exposing the abdominal cavity, in order that all the viscera might be thoroughly and carefully examined, and every wound brought within reach. In a majority of instances the median line gave space enough, in two the bleeding vessels could not be reached without a lateral prolongation toward the flanks.

There was no reason to suppose that the extent of the incision added very much, if at all, to the gravity of the operation. After opening the abdomen, the intestines were all turned out, critically examined for perforation or contusion, the situation of these fixed, and the hæmorrhage therefrom controlled by means of the snap forceps, after which wounds of special organs were sought for. If the substance of the spleen or the kidney was found perforated, the organ was immediately removed after ligating its blood-vessels, the stump being returned to the abdomen. If slight lacerations only at some point on the surface had been produced, these were closed by bringing peritoneal surfaces of the organ over the wound by means of the continued suture.

The peritoneal sac was then carefully and thoroughly cleared of blood and other extraneous substances by repeated sponging or irrigation. The intestines, which during this process had been protected by being enveloped in towels wrung out of warm water, were now cleanly sponged, while all unwounded portions were returned to the abdomen.

It seems to be of little consequence whether or not the intestines be returned to the cavity in any definite order — in fact, it is doubtful whether they are ever returned precisely to the same positions they originally occupied before being disarranged during

the operation. Still, some care must be used in order to avoid the accident which happened in one experiment. After the divided ends of the intestine had been united, it was found that during the manipulation one of the ends had in some way been passed through an opening in the divided mesentery, so as to produce a figure of eight convolution in the tube. It was left in this shape. The animal recovered, and I have the specimen with me to demonstrate the perfectness and security of the union in the intestine at the place of reunion. The animal was sacrificed to secure the specimen six weeks after the operation. The abdominal cavity was quite free from evidences of inflammation, except where the misplaced folds lay in contact with each other. At this point slight peritoneal adhesion had formed between them.

Where several wounds occurred rather close together, severe enough to destroy a considerable portion of the integrity of the bowel, one resection was made to include all of them, even when the length of intestine removed measured ten inches or more. Where the points of injury were widely separated from each other and extensive damage done at each point, several resections of a length of the tube just sufficient to include the injured portions were made.

In the former case, in which several inches, or more, of the tube were taken away, the mesentery was ligated as close as practicable to the intestine (Fig. 3), in sections corresponding to the number of blood-vessels going through it to the resected portions. The mesentery was then divided close to the intestinal wall. After this, the tube itself was separated, and the wounded portion removed. One artery, always needing ligation, was found in the divided ends at the point of junction of the mesentery with the intestine. Before the final division of the intestine, its contents were pushed back out of the way, compression exercised upon its walls by a pair of forceps or a temporary ligature, in order to prevent extravasation of its contents through the divided ends. The mark of constriction made by the forceps or ligature, used to close the lumen of the bowel, was to be plainly seen several days after the operation. The safest compression can be made by an assistant's fingers. Results soon demonstrated the paramount necessity of carefully selecting the place for final division of the intestine, in order to avoid sloughing of the edges approximated together, the results being best in those cases where the division was made close to the point at which any given mesenteric artery approached nearest to the intestine, as compared with those where the cut was made in the intervals between any two branches of these vessels, and this was seemingly dependent on the better supply of blood belonging to the former cases. Immediately after division of the intestine, there followed an instantaneous, regular and considerable contraction of the caliber of the tube (Fig. 4, a), close up to the divided edge, caused by the action of the circular muscular fiber. The diameter was often diminished more than half by this contraction. This persisted for a time, but was soon followed by an eversion of the mucous membrane, which rolled out and over the constricted portion in a remarkable manner. (See Fig. 4, a, b and c.)

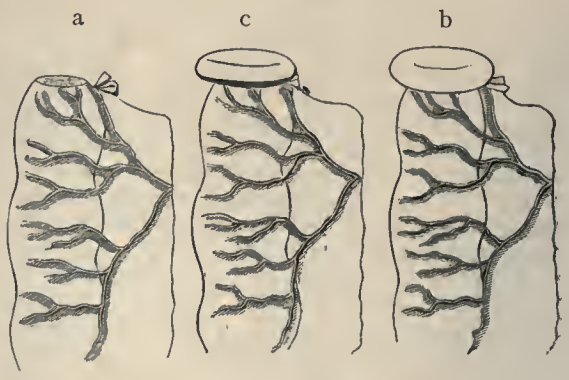

Figure 4.

This protrusion of the mucous membrane forms a serious obstacle to easy and close approximation of the ends of the bowel in the efforts to bring them together by sutures; and, when turned into the bowel during such procedure, diminishes its caliber considerably, although it was not demonstrated that the obstruction was ever sufficient to prevent the passage of the intestinal contents. Several efforts were made to get rid of it, and overcome the seeming delay caused by its presence, but all these were finally abandoned.

It was pared away with the scissors; it was dissected up from the other coats for a quarter inch from the edges, but the conclusion was finally reached that instead of being a harm, its presence was useful in giving support, protection, and perhaps vascularity to the freshly sutured edges; at least, in all instances where it was removed, the stitches were found torn out and union defeated; in no instance where it was left entire did there fail to be union in some part, and no sutures gave way when properly applied.

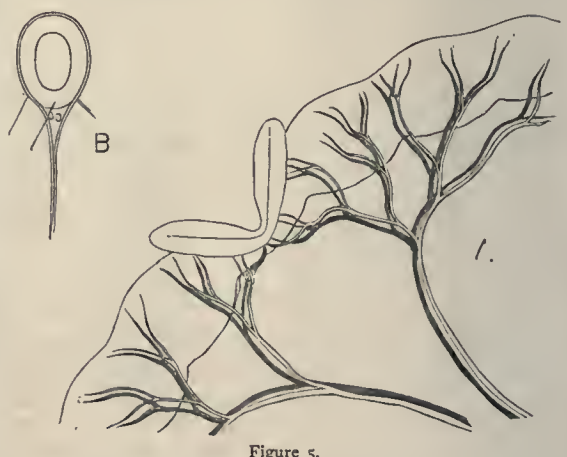

Figure 5.

In all instances where a perforation was severe enough to require a resection of the wounded part, it was found advantageous to leave, if possible, a strip of the bowel near the mesenteric junction (Fig. 5 A), taking out the wounded portion by means of a "V"-

shaped incision. The part left acted as a support to the wound, avoided division of the blood-vessels at this point, opposed the action of the longitudinal fibers, and in no instance in which this plan was adopted was there any appearance of separation of the wound or any displacement of stitches. In perforations through the stomach, the wound did well after drawing the peritoneal surfaces some distance from the edges thereof, over it, by means of the continued suture, thus converting it into a linear wound (Fig. 6 A). The same plan was adopted with success in abrasion and small perforations in the small intestines. (Fig. 6 B.)

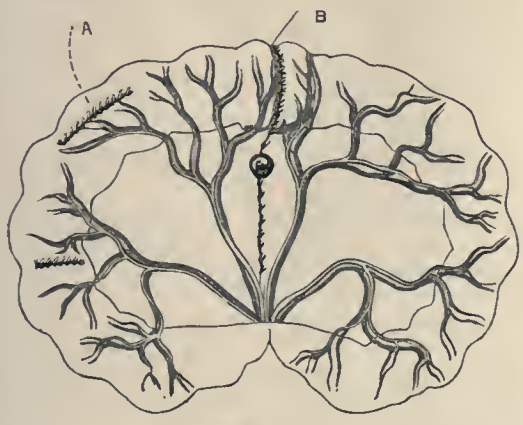

Figure 6.

This way of treating the bullet openings in the bowel is susceptible of much wider application than would appear possible at the first glance. I am quite well satisfied that it will safely take the place of excision in not a few cases of quite severe injury. The torn edges of the wound can be turned in, and peritoneal surfaces fastened together, even in large wounds, with perfect confidence in the result of safe and secure adhesion following.

It seems probable that by far the greater number of successful cases will follow a single resection, even if that include a number of perforations, and involves eight or ten inches of bowel, in comparison with those cases where several excisions are made of wounded portions widely separated.

Perforations passing through the mesenteric surface of the intestine were found the most difficult to treat, and even if slight, seemed always to require a complete excision. A partial excision of this surface of the bowel resulted in an acute-angled elbow which never did well.

The point of attachment of the mesentery with the bowel, will usually be found the most troublesome to manage, in applying the sutures in restoring a complete division. (Fig. 5, B.) It is quite difficult to so place the sutures as to secure a perfect reinversion of the mucous membrane, to bring serous surfaces fairly in contact with each other, and to get a sound junction. The difficulty arises apparently from the manner in which the folds of peritonæum separate from each other before passing on to invest the bowel, leaving a little triangular interval filled with loose connective tissues, fat and blood-vessels. Now, if the suture fails to include the muscular coats of the intestine as well as the peritonæum at this point, the junction will surely give way and extravasation result. To make this point secure, the greatest possible care must be taken in placing at least three sutures, this number being usually quite enough to include the troublesome area, and these should always be the first sutures applied. In placing the remaining sutures to complete the junction after placing the three sutures mentioned, at the mesenteric surface, it assists materially in the ease of application, saves time, and especially avoids trouble from the everted mucous membrane, to apply one at the most convex surface, and then one half way down, on each lateral surface. After this is done, the remainder can be introduced easily and rapidly. If introduced in a regular series, one after the other, all the way around, it is a very slow process; the mucous membrane is always in the way, the needle openings in the intestines are apt to be uneven, and it is altogether the poorest plan of proceeding. The advantages mentioned as gained, by taking the course suggested, are certainly all of them items of importance, and have some bearing on the result. At best, these procedures will be found very prolonged and tedious. The material used by me for sutures was silk and catgut — the latter for the continued, the former for the interrupted ligatures. No. 1 catgut; No. 2 silk. The needles were the full curved round needle, or ordinary straight sewing needle; the latter is the best. The sutures were introduced about the third of an inch from the divided edges, made to include the peritoneal and muscular coats, and brought out just free of the edge on one side, and were then reintroduced close to the edge, and made to include about the same amount and kind of tissue on the other side, being very sure not to allow the needle to pass into the intestinal cavity. Howse, of London, proved conclusively in his cases of gastrotomy, that the fact of entrance of the needle into the cavity of the tube, carrying the thread with it, made the difference between success and failure, cases dying from peritonitis and extravasation when the entry occurred, and recovery following when the thread included only the peritonæum and muscular coats.

Again, the everted tissue should be turned in before introducing the needle, so that it will pass through the rim of constriction. If entered too far away from the divided edge, too much tissue is turned into the intestine. When the mucous membrane was turned in, and the suture tightened, two broad surfaces of peritonæum were brought in contact. This you will recognize as Lembert's suture (Fig. 6, B), with one change. Lembert directs that only one and one-half line in width of tissue should be taken up by the suture. This amount of tissue will do very well in the closure of small slits, for which it was intended, and to which it was applied; but complete resection needs a much firmer hold to withstand the strain of peristaltic movements. *The fact is that it makes no difference whatever what kind of suture is used, so that the principle of positively securing the application of two broad surfaces of peritonæum in contact with each other is certainly carried out. Jobert's,*

Gely's and Czerny's double row of sutures were all given a fair trial, but none of them resulted as well as this. It never failed to be followed by good union when properly applied, with peritoneal surfaces brought together around the entire circumference of the intestine.

The greatest number of mishaps followed drawing the sutures too tightly, which, if done, leads to death of the applied edges, and, of course, to failure. They must be drawn only sufficiently close to bring the surfaces fairly in contact, the subsequent swelling from obstructed circulation will hold the surfaces firmly together until glued to each other by the rapidly forming adhesive material.

The interval left by the incurving of the edges of the bowel, immediately after the completion of the operation, was found entirely obliterated, and the sutures covered up by effused lymph at the end of twenty-four hours. In one or two instances where very small openings had been made in the bowel, they were occluded by passing a suture around the perforation, a short distance from its margin, pushing the wound into the cavity of the intestine, and then by tightening the suture the peritonæum was drawn together over it; a very satisfactory plan of procedure where circumstances will permit its application.

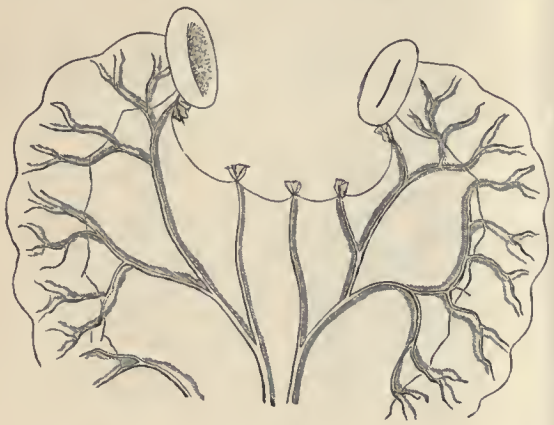

Figure 7.

The question of the proper disposition to be made of the divided mesentery, after removal of some length of the intestine, is an important one to decide. No plan adopted proved entirely satisfactory. Previous to separation it was ligated in sections (see Fig. 7); the part beyond ligature is apt to mortify and thus prove a focus for fatal inflammation. The tissue of the mesenteric membrane is not very vascular, and the vitality of the distal portion of the stump is seemingly best provided for by causing it to adhere to surrounding vascular parts.

In some cases the stumps were left free in the abdominal cavity; these all did badly, each showing mortification. In others the different sections were all included in one suture and then stitched to the bowel at the seat of operation, making as nearly as possible a continuous surface of mesentery.

These did much better, there being few instances of sloughing. When sloughing occurred, it seemed to be dependent upon and follow a too tightly fastened ligature. This method above mentioned of treating the divided mesentery, is useful in another way; it gives support to the bowel at the point of resection, maintains the intestine in proper position by preventing bending, and also leaves fewer raw surfaces free in the serous sac. This last, a condition acknowledged to be the frequent source of serious trouble from faulty adhesions to surrounding organs, and from furnishing points from which septic absorption takes place.

A plan of dividing and treating the intestine and mesentery has been suggested to me as a possible improvement on those already noticed. This is to make the separation through the intestinal walls three-eighths of an inch on either side of the mesenteric attachment, tear away the mucous lining of the retained strip of bowel, and draw the peritoneal surfaces thereof together by the continued stitch. This would avoid division of the blood-vessels going to the bowel, do away with the necessity of using ligatures, and leave no raw surfaces free in the abdominal cavity. The opening formed by the folding together where the bowel-ends are united, should be closed by the continued suture.

Bleeding from slight lacerations of the spleen, kidney or liver, can be controlled with actual cautery lightly applied, perhaps the very best method to adopt. If the wound is a complete perforation of the body of the organ, the hæmorrhage is very great, rendering extirpation of the entire organ apparently the only sure way of surmounting the difficulty.

Quite frequently the entire mass of the greater omentum seemed to require removal. The bullet in transit not only perforated it here and there, but passed along between its folds as well, leaving injured tissue and blood-clots of considerable size in its track. These clots disseminated themselves in the meshes in such a way as to entirely prevent their removal without tearing the tissue to shreds. When this condition was present in any degree the mass was amputated, after ligation, in sections. In a few instances these stumps gave rise to trouble, either from recurring hæmorrhage or mortification of the distal end.

In the after treatment it was often necessary to administer morphia to secure quiet. Very careful attention must be paid to the amount and kind of food given for some time after apparent recovery. One experiment resulted in failure after the lapse of three weeks from date of operation. The animal was lively, running about as freely as ever, all the functions normal, and the external wounds all healed, when it suddenly sickened and died, having tetanus accompanying rupture of the intestine, several inches above the seat of resection. Post-mortem examination showed masses of food and grit and greasy cloth, occluding the intestine, and distending it so enormously that rupture was produced; the tube at the seat of operation was patulous and nearly of usual size. This animal was lost solely through neglect in the matter of feeding. Milk alone was given in all other cases for some weeks after operation. Certainly this is a matter of great importance,

and suggestive of the proper care to be given after all such operations. Extreme emaciation occurs during the first week following the operation, and, if there is shown any likelihood of recovery, there follows a voracious appetite, which should be very sparingly gratified.

The circumstances under which these experiments were done, were such, that it was absolutely impossible to carry out full antiseptic appliances. The external incision was treated with iodoform and oakum or absorbent cotton, and with two exceptions healed by first intention.

The bullet wounds through the abdominal walls were not probed nor disturbed in any way. Occasionally, when large and much contused, iodoform was poured on them. In only two instances did they suppurate or give rise to any trouble whatever, crusting over and healing rapidly. This result clearly enforces the rule of not disturbing the track of a bullet through the soft parts, unless the most urgent reasons call for interference. The damage of a serious nature is not in the abdominal walls, but in the cavity; the nature of it can be better ascertained and the most satisfactory treatment adopted, after section through the linea alba, rather than by enlargement of the wound of exit or entrance, if any surgical interference be instituted.

In gunshot wounds of any part of the body, it is not the injured muscular tissue or fascia that causes grave concern, but the torn arterial trunk, or severed nerve, or fractured bone made by the missile, and here, too, incisions out of the course of the bullet track often furnish the best exposure of the parts for manipulation.

None of the wounds of entrance were perpendicular to the surface of the abdomen. All were more or less obliquely directed through the component tissues of the walls, so that they were valve-like in character and tended to close spontaneously. None of the cases presented any extravasation of the contents of the intestines through the external wounds, notwithstanding the lacerations of the tube were often very extensive, and considerable quantities of fæcal matter were found in the peritoneal sac. The conclusion naturally follows, that the discharge of such matters, through the external openings, is not of frequent occurrence after the wounds under consideration. The absence thereof is far from being proof of the non-occurrence of perforation of the intestine.

It can scarcely be expected that extravasation through the wounds in the abdomen will often happen as an immediate occurrence. This is most likely to occur, if present at all, several days after the injury, following adhesion of the bowel to surrounding parts, and the accumulation of considerable quantity of matter.

There is no reason to suppose that interference with the adhesions to be met with in operations, done some time after the injury, would be followed by any worse consequences than that which follows their disruption during the performance of operations for ovarian or other tumors. The hazard supposed to attend their severance is certainly exaggerated. With a clean cavity, they will do equally well in all cases.

These experiments have not developed any data which will aid in the positive diagnosis of the severity, or extent, or kind of injury done to the viscera, or render such diagnosis less difficult than heretofore, previous to abdominal section.

They go a step in advance of this by supporting the assertion that it is absolutely useless to expect immunity from perforations of the intestines when the bullet has traversed the cavity. It seems, and is infinitely more reasonable to subject a patient to the slight risk of an abdominal section, showing unwounded intestines, than to allow him to pass through the fearfully deadly peril of wounded intestines unrelieved, on the barren supposition that they may have escaped injury.

Some uncertainty as to its necessity is likely to arise, except in those cases showing extravasation of the contents of the bowels, or those where the free loss of blood, as indicated by the usual symptoms accompanying such accident, calls for aid. When doubt exists, and a critical condition of the patient argues severity of lesion, abdominal section surely seems to promise relief that can come in no other way. Exploratory incision of the abdominal walls has been done so often, and with so little hazard, as to entitle it to be classed as a procedure in itself almost destitute of danger. Such a conclusion is certainly supported by the results developed during these trials. The rule was, no trouble whatsoever from this incision.

No deduction can more justly or positively follow, as the result of these experiments, than that an incision *de novo*, through the linea alba, is the best method of procedure in the treatment of the class of wounds under consideration; a plan far preferable to enlarging either of the openings made by the bullet. It at once gives command over the entire cavity; therefore any lesion likely to result in harm is far less liable to be overlooked; it is the least vascular part of the walls; incisions thereof are more easily and perfectly co-aptated than elsewhere, heal readily and soundly, and as a consequence, the oncoming cicatrix is less likely to be followed by ventral herniæ.

Thirty-nine (39) animals were used in these experiments, exclusive of those dying from the effects of the anæsthetic. Two of the thirty-nine were used to demonstrate the effects of closure of the main branches of the mesenteric artery upon the nutrition of the intestines. Of the remaining thirty-seven (37), three cases died immediately after the shot or from the effects of profuse hæmorrhage; one having a division of the aorta just below the mesenteric artery; the second had a large laceration of the kidney, with a wound of the renal artery; the third, a laceration of both kidney and spleen. One case, No. 4, had tetanus three weeks after operation, and is given a special position, simply owing to the presence of this condition as a complication in the case. The post-mortem examination, as already mentioned, developed other conditions which would have caused death, and which were no doubt the cause of the tetanic

convulsions. Twelve of the remaining cases died inside of twenty-four hours, either from severe primary or recurring hæmorrhage, and the effects of the very extensive character of the wounds. Two out of this twelve (12) were cases requiring removal of the pregnant uterus, accompanied with many perforations of the bowel; death in both occurred from secondary hæmorrhage from uterine stumps—the ligature having slipped. Three (3) more had slight lacerations of the spleen and numerous perforations of the intestine. The spleen was removed and several inches of the tube excised in each case. In three (3) others, from twelve to twenty inches of the bowel was excised, and many arterial trunks severed. One of the twelve (12) had rapid mortification of five or six inches of the entire caliber of the bowel, apparently dependent upon the division of two large mesenteric arteries by the bullet, and also the resection of six inches of the intestine. The remaining three (3) of the number dying inside of twenty-four hours, are classified as having died of shock. On all of them the damage done by the missile was of excessive severity. The bullet was of large size, (38 or 44 caliber) and the fire-arms possessing great penetrating and lacerating power. There was not manifested in any case any recognizable evidence of shock aside from that following great loss of blood. The transit of the bullet made no noticeable impressions upon the pulse or respiration. In every instance where signs of severe prostration became manifest, through change in respiration or weakening of pulse, there was found profuse hæmorrhage to account for such condition. I am inclined to infer that the cases are exceptional indeed, in which purely nervous shock will give rise to symptoms severe enough to mislead one to perform an unnecessary ventral section; rather, when severe constitutional manifestations follow the passage of a bullet through the abdominal cavity, good cause for them will be found, as soon as the cavity is opened, in wounded viscera or blood-vessels, and this course will often be the only possible way of either actually saving life or even prolonging it. None of these twelve cases could possibly have lived longer than twenty-four hours after the injury received. Most of them would have died much sooner without the control of hæmorrhage, alone made possible by the opening.

Two cases of the series were subjected to the expectant treatment. These cases were chosen because their injuries did not seem very severe; the hæmorrhage was not great, and the prostration not extreme. Both died; the first in one day; the other lived five days. Post-mortem examination showed extensive extravasation of the contents of the bowel and septic peritonitis.

In one case an attempt was made to establish an artificial anus. The wounded intestine was resected, and the ends fastened to the edges of the abdominal incision. The animal died of septic peritonitis in three days. This trial was made early in the experimentation, before any definite plan of procedure had been settled upon. This is the only experiment that has given rise to any regret, for I feel satisfied that, with a fair junction of the bowel and a clean abdomen, the animal would have been saved.

Eighteen of the thirty-seven (37) have thus far been accounted for; of the remaining nineteen (19) ten (10) died, and nine (9) recovered.

The ten fatal cases lived from three days to three weeks. Peritonitis from one cause or another seemed to be the precursor of death. In six of them, mortification of the ligated stumps of the divided mesentery, together with mortification of the edges of the recently united bowel, were present. In the one that lived three weeks, death was the result of intestinal obstruction, caused by the adhesion of a fold of the intestine to the stump of mesentery left free in the cavity. An acute flexure was produced at the point, against which the contents of the bowel had accumulated in large quantity. A rupture was found above this mass, through which extravasation had taken place. The inflammation was so intense that everything was matted together, and the specimen so horribly offensive it could not be preserved. There was no separation at the point of operation on the bowel; it was thicker here than elsewhere; but full distension with water was allowed without leaking. All of these cases demonstrate conclusively the necessity of great care in the manner of dealing with the divided mesentery, and in the application of the sutures which bring the separated bowel-ends together. The remaining four furnished evidence of separation of the recently united parts of the intestine at the mesenteric junction. In all of them the thread failed to include the muscular and fibrous coat of the bowel, holding only the peritonæum. The result was extravasation, and death followed.

It may be a matter of surprise to you that the percentage of successful cases presented is so small—nine out of nineteen—so few out of so many. To me, knowing well the extremely adverse circumstances under which these experiments were performed, it is a matter of astonishment to have so many recoveries included in so few cases. It is suggestive to remember that all the recoveries followed the use of Lembert's method of bringing the peritoneal surfaces together, while in many of the failures, trials were made of other methods. Full six weeks have gone since the last case followed by recovery was subjected to operation. The first favorable case was treated four months ago. None of the animals present evidence of being other than in their usual health. The longest resection of intestine among the recoveries measured over six (6) inches and included four (4) perforations.

It is scarcely possible to do work of any kind under more disadvantageous surroundings than accompanied the performance of these experiments. The operative work was carried on, and the animals kept in the prosector's room of a medical college during the winter season, in the midst of the odds and ends and bad hygienic conditions of such a place. No better accommodations could be secured. The labor has been purely one of experimental inquiry, and not a striving after recoveries, implying a choice selection of attending circumstances and special preparations to that end; therefore I judge it proper

and fair to claim the results as satisfactory. These results certainly indicate that a better showing is likely to follow where more satisfactory control can be had over both patients and surroundings, than was present during these examinations.

They clearly demonstrate that a hopeful expectation of recovery may be entertained after operation, and suggest the nature of the injuries produced, what accident to avoid, and what treatment to adopt.

My confidence in coming before you with no better record is assured, when I remember that all of you are well aware of the great mortality of these injuries, under all circumstances. It must be large, surely, when Dr. Otis, in the surgical history of the war, says the authenticated cases of recovery can be counted on the fingers of one hand. It can not be said that operative interference in these cases has as yet an established position. Still, perhaps Dr. J. Marion Sims looked with prophetic eyes upon the future, when he closed the article already referred to with the following words: "I have the deepest conviction that there is no more danger of a man's dying of a gunshot or other wound of the peritoneal cavity, properly treated, than there is of a woman's dying of an ovariotomy properly performed. Ovarian tumors were invariably fatal till McDowel demonstrated the manner of cure, which has now reached such perfection that we cure from 90 to 97 per cent. of all cases. And by the application of the same rules that guide us in ovariotomy to the treatment of shot wounds penetrating the abdominal cavity, there is every certainty of attaining the same success in these that we now boast of in ovariotomy."—*British Medical Journal*, March 4, 1882.

In a rather quaintly-written but richly-laden book on surgery, by Herr L. Heister, Professor, etc., written in 1739, there occurs this passage:

"When the intestines are wounded but not let out of the abdomen, and therefore their wounds are out of reach, the surgeon can do nothing but keep a tent in the external wound, according to the rules laid down at chap. V, and after this bleed the patient if his strength will admit of it, advising him to rest, eat abstemiously, and to lie upon his belly; the rest is to be left to Divine Providence and the strength of his constitution. But the question may be asked here whether a surgeon may not very prudently, in this case, enlarge the wound of the abdomen, that he may be able to discover the injured intestine and treat it in a proper manner. Truly I can see no objection to this practice, especially if we consider that upon the neglect of it certain death will follow, and that we are encouraged to make trial of it by the successes of others. Sacherus, in Programmate Publico, Lipsiæ, ed. 1720, mentions a surgeon who performed this operation successfully."

A period of 100 years and more has rolled away since Dr. Heister published his belief and reported recovery, to the time when Dr. Sims expresses his convictions—over a century of doubts, timidity, uncertainty, and gloomy misgivings, lightened only occasionally by some bold and resolute assertions. The future asks for action, and it is not unreasonable to assert that careful trials will accomplish successful results.

Avoiding any spirit of dictation, it seems proper to tabulate the following conclusions as an outgrowth of the experiments:

1st. Hæmorrhage following shot wounds of the abdomen and the intestines, is very often so severe that it cannot be safely controlled without abdominal section; it is *always* sufficient in amount to endanger life by secondary septic decomposition, which cannot be avoided in any other way than by the same treatment.

2nd. Extravasations of the contents of the bowel after shot injuries thereof are as certain as the existence of the wound.

3rd. No reliable inference as to the course of a bullet can be made from the position of the wounds of entrance and exit.

4th. The wounds of entrance and exit of the bullet *should not be disturbed* in any manner, except to control bleeding or remove foreign bodies when present. They need only to be covered by the general antiseptic dressing applied to the abdomen.

5th. Several perforations of the intestines close together require a single resection, including all the openings. Wounds destroying the mesenteric surface of the bowel always require resection.

6th. The best means of uniting the wounded intestine after resection is by the use of fine silk thread after Lembert's method. It must include at least one-third of an inch of bowel tissue, passing through only the peritoneal and muscular coats, never including the mucous coat. The everted mucous membrane must be carefully inverted, and needs no other treatment.

7th. Wounds of the stomach, small perforations, and abrasions of the intestine, can be safely trusted to the continued catgut suture.

8th. Every bleeding point must be ligated or cauterized, and especial care devoted to securing an absolutely clean cavity.

9th. The best method of treating the stumps of divided mesentery is to save the mesenteric surface of the bowel as above indicated.

10th. *Primary abdominal section* in the mid-line gives the best command over the damage done, and furnishes the most feasible opening through which the proper surgical treatment of such damage can be instituted. Farther, its adoption adds but little, if anything, to the peril of the injury.

11th. Is not the moral effect of the assurance to the patient, that he will be placed in a condition most likely to lead to his recovery, a good substitute for the mental depression accompanying the general and popular conviction that these wounds mean certain death?

EXPERIMENTS ON GUN-SHOT WOUNDS OF THE ABDOMINAL CAVITY.

Appended to Dr. Parkes' Address.

EXPERIMENT No. 1.

Wednesday, November 14, 1883.—Long, lean and lank setter; about 30 lbs.; in rather poor condition. Etherized with common ether and shot through abdomen with a No. 32 cal. ball, which passed directly through anterior wall to the innominate bones. Upon opening abdomen found ileum perforated about the middle and at the ileo-cæcal valve, and slightly grazed at another point. Extravasation of intestinal contents at each perforation. Some entozoa. The two perforated regions were resected and continuity of ileum re-established by Lembert's intestinal stitch. The grazed portion was closed by continued suture. Intestines washed with a feeble solution of carbolic acid, and returned to abdomen; and the external wound closed by two sets of sutures, one set through muscular walls, including peritoneum, and the other uniting the skin. Drainage tube inserted, and wound dressed antiseptically with gauze, cotton, etc.

Entire operation lasted about one hour, and conducted antiseptically, abdomen being shaved, washed and irrigated with carbolized solution, etc. The animal waked considerably shocked. Gave rectal injection of alcohol and water (1-2 1-2) about 3 drachms, and in half an hour gave 10 drops of laudanum. The dog seemed very bright. At 6 P. M. was considerably weakened; respiration very rapid, with much febrile excitement. About three-quarters of a pint of warm milk per stomach-tube, twelve drops of laudanum, and about a quarter-grain of morphia hypodermically. Tied him under register well bedded in a large comforter, and covered him with a coat.

Thursday, November 15.—Dog died between midnight and morning. Post-mortem. Abdomen filled with bloody serum and intestines inflamed and badly smelling; kidneys a bright blue, and rectum filled with hardened fæces. Dog had vomited during the night a quantity of hair and some pieces of cartilage, etc. Died of shock. Wounds of intestine well agglutinated.

EXPERIMENT No. 2.

Friday, November 16.—The ball (32) severed the aorta.

EXPERIMENT No. 3.

Saturday, November 17.—(Ball 32 Cal.) Dog etherized, shaved and shot very near abdominal margin. Upon opening abdomen (incision 3½ inch), but one loop of gut was found perforated. This was excised, and the continuity of intestine restored by eighteen individual silk stitches, which brought serous surface to serous surface, the greatest difficulty being encountered at the mesenteric attachment to the gut on account of the fat which lay between the two layers of peritonæum and adherent to the gut itself. Extravasation of intestinal contents. Tape worm.

Wound closed with heavy silk and dressed antiseptically. Gave 15 gtt. laudanum at night.

November 18.—Animal seems bright, but disposed to remain quiet, drinks plenty of water and urinates freely. Respiration hurried and febrile action high.

November 19.—Seemed very well, and partook of some milk during morning, but began vomiting in the P. M. a sour, watery and greenish fluid. Gave per rectum about ¼ grain morph. sulph. at night, and left him sleeping comfortably.

November 20.—Seemed quite lively and comfortable, the dressings having been removed the day before and a large body bandage applied. About 11 A. M. seemed rather tired, and vomited large quantities of the same sour fluid as before; would not eat meat or drink milk, but drank water freely. Gave about ⅜ grain morph. sulph. hypodermically, and during the P. M. he seemed extremely sleepy and much disposed to lie down flat, but is nervous and easily alarmed by sudden noises, etc., etc. This condition lasted all day, and suppose it is the effect of the morph.

November 21.—Died during night. Post-mortem showed a separation of the resection which had evidently first torn out at the mesentéric attachment. Extensive peritonitis, intestines being agglutinated together and abdomen filled with fluid blood and fæces.

EXPERIMENT No. 4.

November 23.—(Ball cal. 32.) Very large dog, weight about seventy-five pounds. Upon opening abdomen found a section of intestine for about six inches perforated in several places, the ball apparently having skipped along inside of the gut; at another place the free edge was shot off and other portions of the ileum grazed three times. The middle section was resected entirely, and closed perfectly; the shot edge was closed by trimming edge or side of the tube of intestine by a "V"-shaped cut towards the mesenteric attachment, and that also was closed fairly well. This was close to the left end of the pancreas. Each opening showed extrusion of contents. Many worms.

The operation lasted two hours, abdominal wound closed by two sets of sutures, one set through the muscular walls, the other bringing the skin in contact. Wound was covered with cotton and bandage applied. Gave 20 gtt. deod. tincture opium and a little water. Seemed to be doing well all P. M., and at night at six o'clock gave about twenty gtt. more of the opium, and left some water where he could get it.

November 24.—Dog still alive and very thirsty, but vomits the water soon after drinking; gave another dose of opium at night.

November 25.—Bandages have not been changed.

November 26.—Changed dressings; dog seems bright. Gave pint of milk; also opium, which he drank readily, but soon vomited. Gave more milk about noon, which he retained... In the afternoon he seemed much weaker. Gave deod. tincture of opium gtt. 20 at night.

Still lives, but is not strong. Lies in any position in which placed and seems quite prostrated. Opium as before seems to revive him; he refuses milk, but

drinks freely of water, which the stomach promptly rejects. In the afternoon, being no better, removed dressings, and although wound was quite healed made an opening for a medium-sized drainage-tube and let out about a quart of bloody serum; re-dressed the wound after injecting a weak carbolized solution of warm water into abdomen through tube. Gave a rectal injection of alcohol and water (1–2 1–2) warm and gtt. 20 of opium. Is getting very poor, but respiration is regular; pulse very weak and rapid.

November 28.—Gave enema of soapy water very weak. Washed out wound and inserted short drainage-tube and fresh bandages. About eleven o'clock had a passage from bowels of a large quantity of black, tarry, and badly smelling fæces, result of injection per rectum. At 2 p. m. was very weak. Gave enema of whisky and milk, warm, about 2 oz., and made a stew of small bits of beef and milk in whisky, which he ate greedily. Gave milk and whisky per rectum every three hours, also Valentine's extract of meat.

November 29.—Seems much stronger; had a semi-liquid passage from bowels. Gave enema every four hours of Valentine's extract, milk and whisky; and also fed pieces of raw meat in milk.

November 30.—Steady improvement; another passage which evidently came from above seat of operation. Fed him on raw steak, and gave whisky per rectum every four hours. Sutures through integument have ulcerated their way out; were removed and dog allowed to lick his wound, as he promptly tears off all bandages.

December 1.—Feeding as before, with steady improvement.

December 2.—Another passage from bowels during night. Gave meat, about one-half pound every three hours, which he eats greedily; marked improvement daily in strength and appearance.

December 3.—Same improvement.

December 4.—Sent dog down stairs in basement.

December 10.—Alive and apparently in perfect health. External wound closed completely.

December 11.—Seems sick; refuses to eat; howls at night.

December 12. Has marked symptoms of tetanus, and is in a state of rigidity with episthotonos.

December 13.—Died, and post-mortem showed an obstruction of intestine by a large mass of meat or a collection of various substances of a gritty consistency which completely obstructed and occluded bowels for some distance. The bowel was opened above this, and abdominal cavity filled with intestinal contents, and organs all adhered, as result of peritonitis; resection wound quite strongly united. Dog died from careless feeding and obstruction following adhesion of knuckle of intestine to omental stump.

Experiment No. 5.

Monday, November 26.—(Ball cal. 32). Medium-sized, well-conditioned and sturdy dog. Shot passed through a six-inch piece of intestine, making several perforations. Much fæcal matter free in abdomen, some opposite each opening. Many tapeworms.

November 27.—Made a resection of but one piece six inches in length, including both wounds. In this instance the larger silk sutures were used. After the continuity of the intestine was restored there was a great deal of bleeding from the interior of the abdomen, the origin of which could not find, but allowing the air to reach into all parts of the abdominal cavity, it ceased after considerable loss of blood. A portion of the omentum being filled with blood, it was ligated and removed. In closing abdominal wound was obliged to tear away a certain amount of fat which was closely adherent to interior wall of abdomen, along the line of the wound, in order to introduce sutures so they would not include the fatty mass. Introduced two drainage-tubes, and applied large pad of cotton. Gave some opium, about gtt. 15. P. M. dog seemed considerably shocked, but was quite thirsty. At night gave more opium.

November 17.—Cotton was soaked with fluid from drain-tubes. Removed dressings, and, upon getting him upon his feet, a small quantity of fluid escaped. In the evening washed out the abdomen with a warm solution of carbolic acid, about ½, and applied dressing of gauze. During the day he vomited considerable milk and water which he had drank, and was evidently very weak. Gave about gtt. 20 of opium at night. Died at 8 A. M. on November 28. Post-mortem showed that sutures had parted at mesenteric edge, and death was from peritonitis. Mortification of edges of resection.

Experiment No. 6.

December 5.—(Ball cal. 32). Died of hæmorrhage, after being shot from wound of renal arteries, the ball perforating one kidney. Several perforations of the small intestines, all of them showing extrusion of contents. One large, round worm free in cavity.

Experiment No. 7.

December 7.—Died under ether.

Experiment No. 8.

December 7.—(Ball cal. No. 32). Ball opened one of the mesenteric arteries, and after resecting three pieces of intestine, and closing wound nicely (every perforation showed fæcal matter, worms, etc.), she died in less than nine hours from the shock. Great loss of blood; died of loss.

Experiment No. 9.

December 10.—(Ball cal. 32). Gave morphine hypodermically at 9 A. M. Medium-sized female dog. Anæsthetized at 9 A. M., and shot at 9.30, first shot simply going through abdominal walls, second shot higher up and perforating spleen. Operation began at 10.15. Found abdomen full of blood, fæcal matter, and some worms. Removed spleen and large mass of omentum; ligated and removed one piece; resected about three inches in length, perforated in two places. Much hæmorrhage; operation concluded at twelve. Gave opium and whisky; much shocked. Died.

EXPERIMENT NO. 10.

A well-nourished bull-dog (female), about twenty-five pounds in weight. Was anæsthetized about 9.15 A.M., and then shaved over the abdomen. Was shot at 9.45 by a 32-100 caliber revolver just posterior to the umbilicus, the bullet entering on the right side about three inches from the median line, the point of exit being in the corresponding situation on the opposite side. On opening abdomen found animal pregnant. There was one wound through the right cornu of the uterus, rupturing the membranes of one fœtal dog, and allowing the escape of the amniotic fluid into the peritoneal cavity. One of the smaller mesenteric arterial branches was cut, and the small intestine perforated in one place. The abdomen contained considerable blood on opening immediately after the shot, and there was slight extravasation of fæcal matter from the gut at openings. The vagina and uterine ligaments were ligated by single carbolized silk ligatures, and the large gravid uterus removed. The hæmorrhage in the mesentery having been checked, the wound in the intestine was resected, about two inches being removed. The free ends were united with the interrupted silk ligature. The peritoneal cavity was sponged out and washed with slightly carbolized warm water. The external wound was united with about ten silk ligatures, and dressed with iodoform and gauze, the whole being covered with oakum and bandaged. About half a grain of morphia was administered hypodermically; and at twelve the dog was allowed to come from the influence of ether. She showed marked symptoms of shock, but rallied in the afternoon. She died in the night. Post-mortem revealed hæmorrhage from the uterine stumps, and some peritonitis commencing.

EXPERIMENT NO. 11.

A full-grown, healthy-appearing dog. Etherized at 9.30 A. M. Abdomen shaved and cleansed. Was shot at 10 A. M., still under the influence of ether, the bullet from a 32 S. & W. revolver passing transversely through the lower part of abdomen. Was placed on table and kept partially anæsthetized until 10.45. The animal then presented signs of extreme loss of blood, feeble respiration and heart action, cold extremities, pallid gums, etc. Abdomen was opened by large crucial incision and found to be filled with blood. Bleeding was ascertained to come from a divided mesenteric artery, and was readily checked by ligature. Clots were turned out, and two wounds of small intestine found. But slight extravasation of contents of bowel into the cavity, still some matter and worms found at openings. The intestine was resected at the site of each wound, about three inches being removed in each place. The cut ends of each were then united by about twelve interrupted silk sutures, so placed as to bring peritoneal surfaces in apposition. Intestines were then returned to their place, the cavity sponged out, and the external wound closed tightly with silk sutures. This was finished at twelve o'clock, the dog appearing moribund at its close, and remaining in a condition of collapse for about three hours. Reaction then took place, and he was able to stand and walk about. Second day took some milk, which was vomited at once. This was repeated at intervals during second and third days. Dressings were changed on third day. No discharge from wound. On fourth day vomiting was increased, and was fæcal in character. Dog too weak to stand. Dressings changed again and wound found to be discharging purulent fluid. Died at 4 P. M. on fourth day. Post-mortem showed sero-purulent exudation in abdominal cavity, intestines glued together by adhesive lymph, wounds uniting well, and occlusion of the bowel in the neighbourhood of one of them, from its having been sharply folded upon itself and bound in the position by the inflammatory exudate.

EXPERIMENT NO. 12.

December 27, 1883.—The bullet, 32 cal., entered the abdomen on a line corresponding to the junction of the anterior and lateral surfaces of the abdomen, just in front of the hind leg, its point of exit on the other side being on the same line a little above the umbilicus.

On opening the abdomen it was found that the lower part of the jejunum was cut in two places within two inches of each other, and that there was considerable blood in the peritoneal cavity from these cut surfaces, there being no mesenteric vessels cut; also fæces and worms.

Both wounds were included in the part excised, and the cut ends of the intestine were fastened together by three sutures, and then stitched to the abdominal parieties, thus forming an artificial anus.

Considerable shock was experienced, and owing to a desire to hasten the operation, the peritoneal cavity was not as carefully sponged as it should have been.

The dressing consisted of iodoform, protective and oakum. Of tinct. opii. deod. gtts. 20 were given by the mouth. The operation lasted two hours. On the following day he took a little nourishment; there was no tenderness, but some pus was squeezed from the point of exit of the bullet, the dog lying on that side.

Next day about one-half ounce of pus was forced from the point of exit of the bullet, the dog lying on that side, and by turning him onto the other side an equal amount was obtained from the point of entrance, but there was no suppuration from the wounds themselves.

He took a little nourishment and seemed to be in good condition, respiration being normal and pulse regular. He had a free urination from the bladder, and soft stools were passed from the artificial opening. He died during the night. Post-mortem revealed a large amount of septic material in the peritoneal cavity.

EXPERIMENT NO. 13.

Saturday, December 29.—(Ball caliber 32.) Medium-sized, middle-aged female dog. Gave with the anæsthetic about $\frac{3}{8}$ grain of morphia hypodermically after shot. Abdomen found full of blood; seat of hæmorrhage found at one of the points of perforation, of which there were two; from these issued fæcal matter, gas and worms; a medium-sized mesenteric artery having been shot off. All the intestines were drawn out of abdomen for examination,

and it was found necessary to resect two portions which were a considerable distance apart, both places closing neatly and perfectly. Abdomen washed out and external wound closed by one set of sutures and a large pad of oakum laid over and held in place by roller first, and over all a many-tailed bandage. Gave 25 gtt. laudanum.

December 30.—Dog got loose during night and was running around very briskly; room very cold and disagreeable. (On the afternoon of the day of operation some person had opened the doors and windows and exposed the animal to a strong, cold draft for about two and one-half hours.) In the evening gave hypodermically morphine, when she vomited for first time and seemed very weak.

December 31.—Seemed lively and well all day; gave milk, which she would drink but could not retain. About noon gave an enema of Valentine's extract, and in the evening left a pan of milk.

January 1, 1884.—She seems as well as ever, but the floor of the room was profusely decorated with vomit. The milk was all gone. Gave an equivalent of an ounce of whisky, of alcohol and water per rectum, and left a supply of water, as she seemed very thirsty. Bandages changed for the first time since the operation. There had been but little discharge and the wound was in good condition. Applied a large pad of oakum and a wide roller as before.

January 2.—Seems quite exhausted. Gave alcohol and water (1-2 1-2) per rectum about four or five times a day in quantities of about 1 ounce; has a diarrhœa and vomits.

January 3.—Diarrhœa continues, but no vomiting. Has some appetite, and gave raw meat (steak) chopped fine, every two or three hours; also fresh milk, which she drinks readily.

January 4.—Seems quite well, and hungry; fed regularly and removed all dressings; wound in good condition. Removed all stiches and did not apply dressing again. Appetite good.

January 5.—Dog is seemingly well; has a voracious appetite. Much wasted in flesh, but appears strong.

January 6, 7, 8.—Fed her upon milk; also meat chopped fine and raw.

January 9.—She seemed well enough to be sent down cellar, where she continues gaining strength and flesh.

January 15.—Is perfectly well. Recovery.

Experiment No. 14.

January 9, 1884.—This dog was allowed some milk a short time previous to the operation, hence his stomach was distended.

The first bullet (32 calibre) grazed the abdomen walls, not entering the peritoneal cavity.

The second entered on a line corresponding to the junction of the anterior and lateral surfaces of the abdomen, a short distance in front of the hind leg, coming out a little nearer the median line, and two inches nearer the front leg.

On opening the abdomen it was found there was some hæmorrhage, mucus and particles of food in its cavity and on surface of stomach, and that the lower part of the stomach was wounded, the point of exit being two inches from the point of entrance, passing through the whole thickness of the stomach. There was no wound of the gut. The peritoneal surfaces were drawn together with cat-gut, by inverting the edges and using the continued suture.

Great care was taken in the *toilet de peritonie*. Immediately after closing the external wound he vomited half a pint of blood, mucus and milk. Time of operation was one hour and a half. Then he was given tincture of opii deod. gtts. xx.

The wound was dressed with iodoform, protective and oakum.

On the tenth was given nothing except a little water. On the eleventh he was given a little milk, which caused some disturbance. On the sixteenth the stitches were removed and no dressing applied, there being but slight discharge from the wound made by the incision and none from the bullet wounds. Recovered.

Experiment No. 15.

Small dog, female, was anæsthetized and shot at 10:30 a. m. (S. & W. revolver, 32 calibre.) First wound passed through abdominal muscles only. Shot again immediately, bullet this time passing transversely through middle of abdomen. Opening made at once by linear incision. But little blood in cavity. All bleeding stopped upon exposure of intestines to air. Five wounds of small intestine found, all showing extravasation of contents. Two resections of five inches each were made to include all wounds. Cut ends were united by a continued cat-gut suture in each place. Intestines returned and abdominal incision united by silk sutures, after thoroughly washing out cavity by 2 per cent. solution of carbolic acid. The operation was finished at 10:30 a. m. Dog was laid in a warm place, apparently suffering but little from shock. External wound dressed with iodoform, covered by protective carbolized gauze, tow, and a bandage. Animal died in about twenty hours. Was not given any food or medicine in that time. Post-mortem showed some small blood-clots about the wounds in the intestine. No serum or other fluids in cavity, and no signs of peritonitis. Death from shock.

Experiment No. 16.

A dog of uncertain breed, about 20 pounds in weight, was shaved over the abdomen and anæsthetized at 10 a. m. Was shot in the abdomen in front of umbilicus, the bullet entering on the right side and coming out on the same side about two inches nearer the median line, not entering the abdominal cavity or wounding the peritonæum. Was shot again, the bullet entering on the right side, external and posterior to the first, and coming out on the opposite side, about two inches from median line. The calibre of the revolver was 32-100. Upon opening the abdominal cavity the peritonæum was found to be plowed across between the wounds of entrance and exit, and the spleen to be slightly nicked, the bullet having skirted the abdominal walls. The only hæmorrhage was from the external wounds and the spleen and track of bullet. The spleen was removed, its

peritoneal connections being ligated by five silk ligatures. The small intestine was resected, about four inches being removed. The abdominal cavity was washed with warm carbolized water. The external wound was sewed up by about ten sutures. The dog came from under the influence of ether at 11:30 A.M. The wound was dressed externally with iodoform and oakum, and fifteen drops of deodorized tr. of opium administered by the mouth. A curious phenomenon was observed upon cutting out the spleen. The stomach and intestine became distended enormously with gas, extruding from the abdominal cavity and covering a large area of the operating-table. They were with difficulty returned with steady pressure. The dog died in the night from shock and hæmorrhages from splenic stumps.

EXPERIMENT No. 17.

January 23.—(Ball cal. 32.) Good-sized coach dog. Bullet passed through abdominal walls without wounding intestines and just entering the peritoneal cavity, as was found after opening abdomen, the point of entrance and exit being on either side of the middle line and five inches apart. Removed the major portion of the greater omentum and also resected about six inches of the ileum and closed the wound by five sutures, the external wound being but two inches long.

January 24.—Seems inclined to be quiet all day; had defecated during the night and urinated very little; drinks but little water, and does not vomit it. Is by nature a very frisky dog, and do not think his extreme quiet very favorable.

January 25.—Seems quiet; no bloating of abdomen; removed bandages; re-applied dressings. Refused milk all day; also water.

January 26.—Gave small quantity of milk in the afternoon; re-applied the dressings which had been removed the day before; found the bullet-wounds much puffed up, and that the stitches had slipped in two places, leaving a hole opening into abdomen large enough to admit little finger. The portion of intestine viewed through opening in external wound looked red and inflamed, but not badly so; little running from the wound. Filled it with iodoform and applied pad of oakum.

January 27.—Gave about one-half pound of meat and a quart of milk; seemed to be ready to get well.

January 28.—Fed meat and milk during day, and he seems to be rapidly getting well.

January 29.—Wound gaping, but discharged him to the cellar. Recovered.

EXPERIMENT No. 18.

January 25, 1884.—This dog, a black and tan bitch, having been shaved the day before, was anæsthetized and shot.

The bullet, 32 caliber, passed directly through the abdomen about its middle, piercing the gravid uterus in two places, and cutting the gut longitudinally. No large vessels were cut. The uterine attachments were ligated *en masse* and the uterus removed. Contents of bowel found at site of wound in intestine.

During the time that an excision of the gut was being made, a profuse hæmorrhage occurred from the uterine stumps, before they could again be ligated by passing a suture through and ligating one-half at a time, the animal was almost exhausted from hæmorrhage.

The excision of the gut was then completed, and the cut ends stitched together with silk. The peritoneal cavity was then thoroughly washed out with slightly carbolized warm water, and the external wound closed. The dressing consisted of iodoform, gauze and oakum.

Of tinct. opii. deod., gtts. xx were given. Death occurred within ten hours after the operation, from effects of the hæmorrhage.

EXPERIMENT No. 19.

Dog was full-grown and apparently healthy. When the abdomen was exposed by shaving, two small abscesses, each the size of a filbert, superficially seated and non-inflammatory, were discovered. They were not disturbed. The animal was anæsthetized at 8:30 A. M., and at once shot through the middle of abdomen with a 44 caliber revolver. The dog was placed upon the table, and a linear incision of about three inches made in the median line. It was there found that the ball had glanced upon the abdominal muscles, and instead of going through the mass of small intestines, had been deflected so that it just entered the peritoneal cavity beneath the linea alba, traversed the cavity for about an inch, producing a contused wound of a fold of intestines, and then entered the abdominal parietes to make its exit opposite the wound of entrance, about two inches from the linea alba. Only a small amount of blood was found in cavity. Although none of the intestines were wounded, a resection of about two inches from the middle of the ileum was made. The divided ends were united by about a dozen interrupted silk sutures. The cavity was washed thoroughly with a 1 per cent. sol. of carbolic acid, the intestines returned, and stitches were being placed in external wound, when the abdominal cavity was found to be filling with blood. Source of the hæmorrhage was found to be a branch of mesenteric artery at the site of the resection, which had commenced to bleed as soon as circulation was restored by warmth of abdomen. A ligature was applied, the intestine returned and the cavity again thoroughly washed out. The external wound was now closed by silk sutures, the wound dusted with iodoform, and dressed by applying a few thicknesses of carb. gauze, covering this with a mass of tow and a bandage over all. Animal appeared to suffer but little from shock. On morning of second day was given ¼ grains morphia with 1-100th grain atropia by the mouth.

On third day appeared greatly prostrated, vomited at intervals, and a muco-purulent discharge was noticed coming from nostrils and eyes. Vomiting ceased on fourth day. Prostration and evidence of fever kept up to the morning of fifth day, when improvement began. Discharge from nostrils continued about ten days. On the fourth day a small quantity of milk was taken and retained. Loose discharge from bowels on fifth day, slightly colored with blood. A rectal injection of alcohol; water was

given on the sixth day. Dressings changed for the first time on sixth day. Wound appeared healthy and united in its deeper portions. Some pus from superficial part of wound from this time on, the dog ate milk regularly, and had regular and normal passages from bowels. On ninth day sutures were removed from external wound, which had entirely closed. On the thirteenth day, February 10, 1884, dog is apparently perfectly well; has been eating regularly of raw beef, and has begun to gain in flesh. On the evening of thirteenth day dog was well. Recovery.

EXPERIMENT NO. 20.

February 2.—(Ball cal. 32). Died from ether before any incision was made.

EXPERIMENT NO. 21.

A strong black dog, about 20 lbs., was shaved over the abdomen and then etherized at 9.15 A. M. Was shot with a 38-100 caliber revolver through the abdomen about opposite the umbilicus; and five inches to the right of the median line, the point of exit being in a corresponding situation on the opposite side. Upon opening the abdominal cavity such a large amount of blood was found that it was necessary to enlarge the incision by a cross cut. A large mesenteric artery was found to be cut and was ligated. Another smaller one was treated in the same way. There were two wounds in the small intestine close together, about six inches intervening between them. Extravasation of contents from both. One was perforating and the other nicking the gut on the mesenteric side. Eight inches were removed, and the free extremities of the intestine united by interrupted silk sutures. There were three other wounds nicking the intestine which were sewed in the same manner without resection. The end of the cæcum, which is peculiarly shaped in dogs, was shot off. Stained mucus and some shreds at the opening. This was sewed, turning the cut end in. The spleen was cut in one place, which was left with one deeply-planted suture. A large fold of omentum was ligatured and removed. The abdomen was thoroughly washed with carbolized water, and the external wound united with about fifteen sutures. It was then dressed with iodoform and oakum, ½ ounce of alcohol and 15 gtts. of deodorized tincture of opium were administered per rectum, and at 12.15 the dog was allowed to come from the influence of ether. The same amount of alcohol and opium were administed as before at 6 P. M. The dog died during the night. Post-mortem revealed no evidence of inflammation, and some slight bleeding from the spleen. The sutures in the intestine were in good condition. The piece of gut, about eight inches long, supplied by the mesenteric artery, which was cut by the bullet, was found to be completely mortified.

EXPERIMENT NO. 22.

February 12, 1884.—(Ball cal. 32). Brindle bull dog. No attempt to sew up the holes in the intestines, of which there were about twenty. Died the day following. "Tilley's anæsthetizer." Every opening showed evidence of extrusion of contents.

EXPERIMENT NO. 23.

February 28, 1884.—Tilley's anæsthetizer. Died before operation from effects of ether.

EXPERIMENT NO. 24.

February 28, 1884.—(Ball cal. 44). A short, strong, Spitz dog. Bullet wounds of entrance and exit 4 in. apart. Intestine perforated in four places and abraded in one spot. Intestinal worms free in abdomen. Tape worms protruding from perforations.

Extravasation of contents of the bowel. No arteries divided by bullet. Resected one piece, (including three perforations) 12 in. in length. Removed a V-shaped piece including the fourth perforation, and inverted the serous surfaces by interrupted sutures, the same as in complete section. The apex of the V (pointed to the attached border of the bowel) controlled the oozing from the abraded spot by small suture passed across the mesenteric side of abrasion, the abrasion being the size of a copper cent, and on the side of intestine. Washed the intestines and abdomen cavity as clean as possible by stream of weak carbolized and pretty warm water from the irrigator; closed abdomen wound by five deeply-placed sutures about one-third inch apart; gave hypod. of one-fourth grain of morphia. Shock and little loss of blood. Omentum also removed.

February 29.—In morning seemed very lively and bright; gave some water, which was immediately rejected by stomach. During morning vomited foul-smelling fluid and two large chunks of meat. About 10 A. M. gave hypod. of one-half grain morphia; in very few minutes he laid down and began to whine as though in pain, and threw up large quantity of offensively-smelling fluid. Died about 3 P. M.

Post-mortem.—Abdomen showed evidence of intestinal extravasation, all organs being bound together by peritoneal inflammation; extravasation of blood beneath peritoneal covering of intestines, and small clots adherent all along the length of ileum. The stumps of ligated mesentery and omentum were black. The seat of the operation showed adhesion of the serous surfaces, and water could be forced through the excised piece which was taken out by a cut six in. to each side of the stitches, without any leaking at seat of operation. The spot of abrasion was swollen and blue, and there had been a little hæmorrhage from it. The intestines generally were contracted, glued together, and pressed into prismoidal and other shapes. Stomach empty.

EXPERIMENT NO. 25.

February 28, 1884.—(Ball cal. 44). "Tasso." Bullet under skin opposite to point of entrance. Intestine riddled in about four places, for which a complete section 20 in. in length was removed and was nicely adjusted; another hole in the ascending colon was closed on each side by the continuous suture; the tip of the spleen being shot off, to arrest hæmorrhage a ligature was passed around proximal side of wound tight enough for that purpose, but yet not enough to cause death of the spleen tissue beyond ligature. The stumps of ligated mesentery being gathered upon a suture, were united to intestine near or about at the seat of the approximation of the divided ends; omen-

tum removed; gave rectal injection of alcohol and water ½ ½ about. Each opening in bowel had more or less of the contents around it.

February 29.—Seemed very quiet all the morning, and was quite indisposed to move. Towards noon, gave him, about 11 o'clock, about 1 oz. of alcohol and water ½ ½ per rectum and some water to drink, which was at once vomited. Seemed very tired all day, and disposed to lie stretched out before the heat of the register, and his breathing was entirely thoracic and by means of the cervical muscles. At 6 P. M. gave hypod. of morph. gr. ⅜, and left water where he could drink.

March 1.—Seemed very weak all day; gave hypod. of morph. ½ gr. twice, the last at night. About noon gave rectal injection of alcohol and water.

March 2.—Still alive, but very cold; listless and indifferent; gave morph. in A. M., and tied him up in blanket. Returned at nine P. M., and poor "Tasso" was in rigor mortis. I think the exposure to cold during the day (Sunday) which was a very wintry day, was in great measure the cause of his death. He refused to drink any milk during the day, and also seemed to have lost his thirst for water.

Post-mortem March 4.—Extensive peritonitis present; no separation of the united intestine to be found at the seat of operation.

EXPERIMENT No. 26.

March 3.—(44 cal. cartridge). Large, fat and old bitch. Used Frank Gould's revolver, 44, and upon opening the abdomen, found four large rents in the intestines (every one of which showed extrusion of contents and some worms) at a considerable distance apart, and a very profuse hæmorrhage from the wound of exit, which was not discovered until the resections were made, of which two included the wounds in the gut, which was about shot off, and much bleeding took place before they were found and ligated. The animal was so fat and boggy that it it was with the greatest difficulty that hæmorrhage could be controlled, and the beast was old and presented signs of cataract in both eyes. The bladder was greatly disturbed, and the structure of the intestines themselves seemed "sleazy," and the sutures tore out with readiness upon slight traction. Cleansed out abdomen as best we could by thorough washing, but a little bleeding was going on when the wound was closed in the abdomen, and the operation given up as a bad job of one-half hour's duration.

March 4.—Found dead.

EXPERIMENT No. 27.

March 4.—(44 cartridge). Medium-sized dog; died from shock on night of 4th.

EXPERIMENT No. 28.

March 6.—(Ball cal. 22, revolver). Very small, black and tan dog. Shot him with a 22 cartridge, and had to use three shots before could get a good perforation and but little bleeding. Resected a piece around the bullet-hole of ¾ inches long, cleaned abdomen and closed tightly; gave morph. gr. ¼.

March 7.—Seemed very bright.

March 8.—Gave little milk and morphia in evening.

March 10.—Milk.

March 11.—Sent down cellar to be fed on milk.

March 12, 13.—Very hearty, and eats ravenously of milk and very little meat.

March 14, 15.—Doing nicely. Recovery.

EXPERIMENT No. 29.

March 6.—(Ball cal. 44). Large, strong dog. Used 44 cartridge. Found the abdomen full of blood; spleen perforated, and intestines wounded in three or four places. From these issued fæces, gas, etc. Removed spleen, omentum, and resected about 12 in. gut, including all the holes but one, which was sewed up by continuous stitch. The animal having lost nearly all his blood by this time, and as death was sure to ensue, one of the mesenteric arteries was ligated to ascertain results.

March 7.—Found dead in morning.

Post-mortem.—Intestine black, but the animal had evidently not lived long enough to get any positive mortification of ligatured part, or any interesting appearance at all.

EXPERIMENT No. 30.

March 10.—Tilley's Inhaler. Large chandler bitch. Killed by ether.

EXPERIMENT No. 31.

March 10.—Tilley's Inhaler. Large Hastman dog. Killed by ether.

EXPERIMENT No. 32.

March 10.—(Ball cal. 22, rifle). Medium-sized bitch. Found three mesenteric arteries severed, and intestines riddled in many places and far apart. Perforations showed fæcal matter and tapeworms. Stopped bleeding and returned intestines without closing the perforations, and closed abdomen. No dressing but iodoform (C. T. P.). Spleen also removed, being perforated.

March 11.—Still alive, and sent down cellar.

March 13, A. M.—No better.

March 14, 15, A. M.—Vomiting, and refused food.

March 18.—Dead. Peritonitis septic. Pockets of fæces.

EXPERIMENT No. 33.

March 10.—Small dog (yellow). Shot with 22 cal. rifle. Three perforations of small intestine, showing fæcal matter. Removed a 4-in. piece in two places, and brought ends together very closely; stitched mesenteric stumps to attached border of intestine. Removed omentum, tying tightly, and also putting in three side stitches connecting sides of stumps on each side of ligation with one another.

March 11.—Alive, but feverish and vomiting.

March 12.—Died. Separation at seat of operation, and stumps mortified. See specimen. Fæcal extravasation.

EXPERIMENT No. 34.

March 12.—(Ball cal. 22 rifle). Old, mangy bitch. Died under ether, Tilley's Inhaler. Perforation showed extravasation of contents, fæcal matter and worms.

EXPERIMENT No. 35.

March 12.—Medium-sized, short-haired, yellow

cur (white nose). Shot with 22-ball rifle. Upon opening the abdomen, found blood flowing from a rent in the side of spleen. This organ was three times the normal size, but no holes in the intestines anywhere, and no hole could be found in the abdominal wall on either side. The bullet lay next the abdominal muscles, and was cut out from the wound of entrance. Free bleeding from the laceration in the spleen, which was controlled by a continued suture. Resected six inches of intestine and closed abdomen. Also omentum removed. Iodoform and oakum dressing; gave morphia.

March 13.—¼ gr. morph. A. M.; very weak P. M.

March 14.—Morph. A. M.; very weak P. M. Temperature 102.

March 15.—Re-opened, but found intestine in solid mass and filled with badly-smelling fluid. Washed out as best I could and reclosed. Seat of operation showed mortification on one side, and stumps of mesentery also were black and soft.

March 16.—Still alive. Morph. gr. ¼.

March 19.—Dead. Found intestinal worms in abdominal cavity.

Experiment No. 36.

March 12.—Short, black, stumpy and very fat dog. Fired four 22-balls at the animal before was sure that any had entered. Found abdomen full of blood; two perforations five inches apart, and two mesenteric arteries shot off near the gut. Each perforation showed extravasation, fæces and worms. Ligated the arteries; resected one piece, including both holes; sponged out abdominal cavity; removed omentum, also a large quantity of fat which hung to the inner wall of the belly, and closed wound. Iodoform and oakum dressing; gave morphia.

March 13.—Quite bright. Morph. A. M. and P. M.

March 14.—Dead. Post-mortem. Found considerable peritonitis and mortification of the ends of the intestines where they were stitched together. The stumps of mesentery and omentum also showed signs of mortification.

Experiment No. 37.

March 13.—Medium-sized brindle bitch. No. 22-ball rifle. Resected one piece six inches having two holes; removed omentum very little; hæmorrhage; gas and fæces from wounds; temperature $98^{2}/_{5}$ at close of operation.

March 14.—¼ gr. morph. A. M. Temperature $102^{2}/_{5}$. Morph. P. M.

March 15.—¼ gr. morph. P. M.; temperature $102^{2}/_{5}$.

March 16.—Morph. P. M.; temperature 102.

March 17.—Gave milk and morph. P. M.

March 19, 20.—Gave milk and morph. P. M.; seems well.

April 22.—Perfectly well; recovery.

Experiment No. 38.

March 13.—Medium-sized yellow dog (with bare spot on tail). No. 22-ball rifle; found one lateral hole which closed by continuous suture, and three holes which were included in one piece which was cut in half by mistake; two arteries gave some bleeding, but were ultimately controlled. Contents of bowel found at each wound. Abdomen closed while yet there was some oozing from the wound, which ceased when bandages were applied; omentum removed.

March 14.—Very weak and much prostrated. Refused to lie down, and can stand with difficulty on his feet. Gave morphia ⅜ hypodermically, morning and evening.

March 15.—Found dead. Post-mortem. Mortification at seat of operation, and escape of intestinal contents.

Experiment No. 39.

March 14.—(Ball 22-cal. rifle.) Medium-sized brindle dog (wolf face); found three ragged holes. Resected one piece which included all openings, the piece being seven inches long; closed neatly, the omentum being removed also (many tapeworms and considerable fæcal matter from openings), then washed clean by irrigator. The entire ileum was inspected and sponged off, and returned to abdomen. Spleen also pulled out and inspected; gave morphia and dressings of iodoform and oakum.

March 15.—Some shock; morphia.

March 16.—Morphia P. M. only.

March 17.—Morphia P. M. only.

March 19.—A. M. morphia, stercoraceous vomiting, and seems very sick; P. M. is evidently dying.

March 20.—Vomiting has stopped, and seems much better. Died in the evening. P. M. Septic peritonitis. Post-peritoneal abscesses.

Experiment No. 40.

March 14, 4:45 P. M.—A young, black, bitch pup; anæsthetized and abdomen opened without shooting; ligated a mesenteric artery and closed wound to be re-opened to-morrow P. M. and resect the part supplied by ligated vessel; gave morph. 3-8.

March 15.—Opened her at 3 P. M. in presence of Prof. Parkes. Intestine supplied by the ligated artery seemed softer than normal and its mesentery showed inflammatory exudate considerable effusion; closed wound, gave morphia at night.

March 16.—Gave morphia, gr. ¼.

March 17.—Sent down stairs.

March 19.—Seems quite well.

April 22.—Perfectly well. Recovery.

Experiment No. 41.

March 19.—(Ball 22 cal. rifle). Medium-sized young bitch (black). Found one abrasion which closed up by continued suture and the intestine in another place was about shot off; fæcal matter scattered all about, worms divided; resected the piece about one inch long; irrigated the abdomen cavity; removed omentum and then found a hole or rather the tip of the spleen shot off which bled some and was controlled by two interrupted sutures; gave morphia, gr. ¼, and applied dressings.

March 18, 19.—Morphia, gr. ½.

March 20.—Seems bright, but very quiet.

April 22.—Quite well. Recovery.

Experiment No. 42.

March 19.—Twenty-two ball rifle (brindle, white bitch). Found one abraded edge and one hole through free edge of ileum, from which contents

issued. Closed one by continued suture and resected across the hole by cutting out a ¾ inch piece. Did not remove omentum. Gave morphia ⅜ and applied dressings.

March 18 and 19.—Morphia. Seems to have a paralysis of left fore-leg since operation and for two days past seems to be salivated.

March 20.—Better.

April 22.—Well. Recovery.

EXPERIMENT No. 43.

March 20.—(Stub tail). A small ½-breed terrier dog. Twenty-two ball rifle. Found two perforations and one abrasion, extravasation of gas and stained mucus and shreds of matter from openings going through mucous coat. Made a resection including all three wounds, the excised piece being six inches long, closed very snugly and connected the ligated mesenteric stumps with the attached border of intestine by a single ligature passing through both stumps (but two sets of vessels having been ligated) and both sides of the mesenteric borders of the united ends of the gut; removed omentum and irrigated abdomen cavity freely with a 1 per cent. of carbolic acid solution. Dressings, oakum and iodoform; gave morphia, ¼. Recovery.

EXPERIMENT No. 44.

March 20.—A young, shaggy, cur dog opened without shooting, and litigated three sets or branches from the superficial mesentery artery, close to the main artery, and also a good-sized anastomatic connection with an adjoining vasa intestine tenuis, which ran parallel with and along the attached border of the bowel. The intestines supplied by the vessels blanched immediately. Closed abdomen; gave morphia, gr. ¼; applied dressings. Recovered.

Died subsequently from ether during examination as to result of above operation six days after it. Found intestine perforated by stick of wood four inches long, rolled in twine. Had removed it, and was about to sew up wound when ether killed him.

EXPERIMENT No. 45.

March 20.—A good-sized spaniel dog (old). Stopped breathing once from ether before shooting. Shot with a rifle twenty-two ball. Found the abdomen full of blood, two arteries having been shot off and the ileum perforated in four places; from each contents extruded, two being so near together and the wounds so great as to almost carry away an entire segment of the bowel, necessitating a removal of about twenty inches. Much bleeding, which took about half-an-hour to control, being from the ligated stumps and bullet-wounds; the tissues were very brittle, and so loaded with fat as to make the operation difficult. Died in one half-hour after closing abdomen wound.

PNEUMONIA.—Professor Purjess, of Buda-Pesth, claims to have found the Micrococci of Friedländer in other diseases besides pneumonia; and consequently denies the infectious character of the latter disease.

MEDICAL PROGRESS.

MEDICINE.

A NEW METHOD OF TREATING NOCTURNAL INCONTINENCE OF URINE.—J. F. Anderson, L.R.C.P., gives us in the *Australian Medical Journal* what is certainly an original method of treating nocturnal incontinence of urine. He places a battery at the head of the bed, attached to the poles of which are two long insulated wires, that pass underneath the pillow and down the patient's back, terminating in two small exposed copper loops placed a little distance apart on the perineum. One of these wires, before reaching the perineum, is brought round to the pubes in front, and there passes down inside a small India-rubber bag, shaped like the upper part of an ordinary male urinal, but closed at the bottom. At the lowest part of the bag this wire is filed clean through, leaving the two metallic ends exposed, and about an eighth part of an inch apart. Into this bag the penis of the patient is put.

Now set the battery in action, and let the patient go to sleep. So long as the bag is empty no current passes, but let the smallest drop of urine be voided, it immediately passes to the bottom of the pouch, fills the interspace between the filed ends of the wire, and so completes the current, the current passing through the body of the patient from one copper loop to the other; immediately the perineal muscles contract and the patient is awakened.

SURGERY.

TRAUMATIC CEREBRAL ABSCESS EVACUATED THROUGH THE NOSE; RECOVERY.—*The Lancet* gives us a reference to the report of Dr. Tassi to the Royal Academy of Medicine of Rome, who presented a patient, who, three months previously, had sustained a comminuted depressed fracture of the skull in the left frontal region. The patient, F. B., from Civita Vecchia, was a robust railway engine-driver. The blow had been inflicted with a sledge-hammer; and the extensive comminuted and depressed fracture was complicated with diffuse hæmatoma and very serious cerebral symptoms; loss of consciousness, high fever, paraplegia, and paresis of rectum and bladder succeeded. Antiphlogistics and counter-irritants were employed, and the propriety of trephining was discussed. Some sero-purulent fluid escaped through the center of the wound, which admitted a probe for a considerable distance into the cranial cavity. The symptoms of cerebral irritation and compression increased, the limbs became contracted, divergent strabismus and priapism ensued, and the speech was monosyllabic and unintelligible. The seventieth day after the injury, sero-purulent fluid suddenly burst from the left nostril, and continued for four or five days, amounting in the aggregate to several ounces. As the discharge progressed, the symptoms of irritation and compression decreased. The patient first recovered consciousness and speech, then sensitive and motor power. In the course of fifteen days, all the

functions of organic life were restored to the normal standard, and in three months from the date of injury, the patient was able to return to work.

ANATOMY AND PHYSIOLOGY.

On the Movements of the Brain Within the Cranium.—M. J. Luys has made a long and interesting communication on this subject to the Paris *Académie de Médecine* (*Bulletin*), in which he gives the results of his experiments as follows :

1. The brain is not as immovable in its cranial box as one is led to believe. Besides the intrinsic movements, due to its expansion and contraction, it has also certain movements which are independent of these.

2. When a man passes from the dorsal decubitus to the abdominal decubitus, his brain follows the movement and glides gently from behind forwards, simply in agreement with the force of gravity and aided by the yielding of the arachnoid membrane whose physiological purpose is naturally explained in conformity to that law of anatomy which prevails wherever there is movement in the economy, as there is a serous membrane to facilitate that movement.

3. When the body is in the vertical position, the cerebral mass settles down and recedes from the cranial vault, to a degree amounting in the cadaver to about 5 to 6 millimeters, slightly less in the living subject.

4. When the body assumes the lateral decubitus, the cerebral mass follows the law of gravity, the superior lobe presses lightly upon its congener over the falx cerebri, which offers but little resistance.

5. The cephalorachidian fluid may modify these movements a little, but does not overcome them, for there is always in the normal condition a space between the cranium and the encephalic mass.

Admitting these facts he applies them in explanation of certain physiological and pathological conditions.

The change of position from the horizontal to the vertical causes by increased pressure of the brain downwards, a change in the vessel trunks of the circle of Willis, a partial obliteration and a consequent condition of general ischæmia for the superior regions. In this way he explains the vertigo that affects some persons on assuming the erect position after lying in bed for a length of time. This also in his opinion serves to stimulate the organic sensibility of the cerebral tissue, to awaken the brain after a night's sleep, for example. In pathology he ascribes the severe cephalalgia which accompanies meningitis as due to the movements of the brain influencing the inflamed and sensitive surfaces of the serous envelope.

MATERIA MEDICA AND THERAPEUTICS.

Etherization by the Rectum.—An editorial in the *Boston Medical and Surgical Journal* gives the experience in Boston of the use of this method as showing that if there are advantages there are also grave objections to the method. In many cases the effect has been out of proportion to the amount of ether used, as it continues to be absorbed after anæsthesia was already complete until it became profound, sufficient in certain cases to cause anxiety. In these cases in which the insensibility grows deeper and deeper, it is impossible to withdraw the anæsthetic. A rectal tube fails to evacuate any sufficient quantity of gas, and one can only have recourse to stimulants and general measures until the effects have passed away. This prolonged effect has followed the smaller doses, and in patients where there was no reason to expect such results. These cases have not rallied easily. In doing away with the local difficulties about the air passages, other local difficulties have shown themselves in the rectum and bowels. The diarrhœa has, in some cases, been marked, and occasionally blood has been passed in sufficient quantities to prove serious, while the vomiting has been in these same cases quite as severe as in patients anæsthetized in the usual manner. In addition, certain cases have proved quite intractable to the new mode of administration within any reasonable time, and inhalation has been added.

From New York comes the account of a case in which two ounces were administered to a child of eight months, in which bloody discharges and death occurred the following night.

The present experience has been sufficient to formulate the following rules, which should guide any one desirous of using the new method, until further experience modifies them :

Rectal etherization should be reserved for cases in which there is some special objection to the administration by inhalation.

It should be made use of only with robust adults.

In general, two ounces should be regarded as a sufficient dose. That dose should be exceeded only with great caution.

When insensibility is fairly established the administration should be stopped.

MISCELLANEOUS.

Dr. Morell Mackenzie's Diseases of the Throat and Nose.—The second volume of this work, which was on the eve of publication, was burned at a fire in a London book-publisher's establishment, and, had not one copy fortunately been in the possession of the author, four years of unremitting labor would have been entirely lost; but the reprint will be carried out by the publishers, Messrs. Pardon, as rapidly as possible, and the volume will, it is hoped, be brought out in three or four months.

Russian Medical Literature.—Dr. Max Bach, in the *Deutsche Medicinische Wochenschrift*, gives to Russia seventeen medical journals, a few of which are confined to special subjects, such as psychiatry, and neurology, medical jurisprudence, military hygiene, etc. In addition to this, the transactions of several medical societies, and numerous theses, besides independent works and brochures, it may be estimated that nearly a thousand independent medical productions are annually printed in Russia.

THE

Journal of American Medical Association.

PUBLISHED WEEKLY.

THE EDITOR of this JOURNAL would be glad to receive any items of general interest in regard to local events, or matters that it is desirable to call to the attention of the profession. Letters written for publication or containing items of information, should be accompanied by the writer's full name and address, although not necessarily to be published. All communications in regard to editorial work should be addressed to the Editor.

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SATURDAY, MAY 31, 1884.

MEMBERS BY APPLICATION.—At the last meeting of the National Association action was taken for amending the constitution in such manner as to provide for the admission of members by application, in addition to the previous methods, as may be seen by reference to the minutes as given on page 573 of the present volume of the Journal (No. 21, May 24, 1884). Under the new provision any member of a State, County or local society, recognized by representation in the American Medical Association, who is himself in good standing in the local society to which he belongs, may become a member of the National Association, by making application in writing, and accompanying such application by a certificate of his good standing, signed by the President and Secretary of the Society to which he belongs, and the payment of five dollars membership fee. The amendment adopted does not specify the officer of the Association to whom the written application, certificate of good standing and fee, should be sent. But as the Treasurer is the proper officer to receive all membership dues, and to keep a record of all who retain their membership by continuing to pay the annual fee of five dollars, it would be better if all papers and money relating to applications for membership in the manner specified above, should be sent directly to the Treasurer, Dr. Richard J. Dunglison, Lock Box 1274, Philadelphia, Pa. Members by application will hold the same rank as other permanent members. They will be entitled to receive the Journal of the Association, attend the annual meetings, and retain their membership so long as they continue to pay the annual dues and comply with the regulations and requirements of the Association, but without the right to vote; the latter being reserved for delegates only.

ILLINOIS STATE MEDICAL SOCIETY.—This Society held its thirty-fourth annual meeting in this city, commencing on Tuesday, May 20, 1884, and continuing until Thursday evening following. The attendance was large and the meeting a profitable one. The full report of the proceedings, which had been prepared for this number, must be deferred until the next, on account of the unusual space occupied by the address of the Chairman of the Section on Surgery and Anatomy in the American Medical Association. The reports and papers read were, in most cases, well prepared and appropriate. As everywhere else, the idea of germs as efficient causes of disease, and germicide remedies, pervaded a large part of the papers and discussions; and it was noticeable that some members economized their materials and labors by favoring the State Society with the same matter that had previously been brought fully before the profession through local societies and medical journals. The profession of the city gave the State Society an elegant banquet at the Grand Pacific Hotel on Wednesday evening, which was enjoyed in a high degree by the large number in attendance.

DELEGATES TO THE INTERNATIONAL CONGRESS.—To the list for delegates for the International Medical Congress at Copenhagen and other foreign societies, appointed at the recent meeting of the American Medical Association, and published in the minutes of the meeting in the JOURNAL for May 24, the name of Dr. G. M. B. Maughs, of St. Louis, Mo., should be added.

A PRIZE FOR MORE LIGHT ON THE BACILLUS.—A Fellow of the Linnæan Society, of New South Wales, offers a prize of £100 for the best essay on "The Life-History of the Bacillus of Typhoid Fever." The essays must be written in the English language, and delivered at the Society's office on or before the 31st of December, 1884.

EDUCATIONAL PROGRESS.—The Faculty of the Medical College of Ohio has adopted the rule to subject all applicants for admission to the college, to an examination on their preliminary or general education, except such as present a diploma or other evidence of sufficient literary attainments.

APPOINTMENTS.—Dr. William H. Welch, of New York, has been elected Professor of Pathology in the Johns Hopkins University, Baltimore. Dr. Thomas A. McBride has been elected Professor of Mental and Nervous Diseases in the New York Polyclinic. Sir William Jenner has been re-elected President of the Royal College of Physicians, of London.

DELAWARE STATE MEDICAL SOCIETY.—The ninety-fifth annual meeting of this Society will be held in Wilmington, Delaware, on Tuesday, June 10, 1884, in the lecture-room of Masonic Temple. This is one of the oldest State Medical Societies in the country. Dr. J. A. Draper, of Wilmington, is Chairman of the Committee of Arrangements, and Dr. G. W. Marshall, Milford, Delaware, Secretary.

PAYING A PREMIUM OR A COMMISSION ON MEDICAL STUDENTS.—According to the newspapers, St. Louis has a medical college (Eclectic) which for business enterprise is likely to rival its neighbor of free scholarship fame in Louisville. It offers its agents $12.50 commission for every student who will pay the regular lecture-fee of $75, and $25 as commission for each full scholarship sold at $150. It will take such commissions a long time, however, to overtake free scholarships and skilled letter-writers.

BOOK REVIEWS.

MEDICAL EDUCATION AND THE REGULATION OF THE PRACTICE OF MEDICINE IN THE UNITED STATES AND CANADA. Published by W. T. Keener, Chicago.

This book is a revised and corrected edition of the Fifth Annual Report of the Illinois State Board of Health. The publisher has found it desirable to present it to the general public, as at this time much interest attaches to the subject. The edition at the disposal of the Board of Health was also inadequate to supply the demand.

The material of the book is distributed under the following headings: Schedule of Minimum Requirements Entitling a College to Recognition; Laws Regulating the Practice of Medicine in the United States and Canada; Medical Institutions in the United States and Canada—Extinct and Existing—Including Examining and Licensing Boards; Medical Colleges—Existing; their Organization; Course of Instruction; Requirements for Admission and Graduation; Fees; Number of Students; Percentage of Graduates to Matriculates, etc.; Auxiliary and Post-Graduate Schools; Colleges for Women only; for Both Sexes; for Colored Students; Colleges Conferring Degrees on Summer Sessions; List of Institutions, Extinct and Existing, not Recognized; Summary and Tabular Statements.

FRACTURES OF THE NECK OF THE FEMUR, WITH SPECIAL REFERENCE TO BONY UNION AFTER INTRA-CAPSULAR FRACTURES. By N. SENN, M.D., Milwaukee, Wis. Extracted from the Transactions of the American Surgical Association, Vol. I, 1883. Philadelphia: Collins, Printer, 705 Payne St. 1883.

This is a neatly printed monograph of 113 pages, on good paper, and illustrated by nineteen well executed cuts.

In addition to a full, if not exhaustive examination of what had been done and written concerning fractures of the neck of the femur, the author has added a valuable series of original experiments on animals, chiefly on cats and dogs. These experiments, to the number of thirty-two, were instituted for the purpose of obtaining answers to the following questions: 1. "What is the mode of repair after non-impacted intra-capsular fracture of the neck of the femur? 2. What becomes of a bone or metalic nail when driven into the neck of the femur and retained permanently? 3. What is the effect of such a nail upon the adjacent bone tissue? 4. Can we, in cases of intra-capsular fractures of the neck of the femur, by immediate or direct measures, as by nailing the fragments together, obtain such accurate co-aptation and retention as to secure union by bone?"

The results of these experiments are given in the first fifteen pages of the work, together with the case of a female patient in which complete bony union occurred after an intra-capsular fracture of the neck of the femur. In the first twenty-one experiments on animals, no nails, either of metal or bone, were driven into the fractured part of the neck for the purpose of keeping the fragments more perfectly in apposition, and in none of them did bony union follow. In the remaining experiments the fractures were produced subcutaneously, and the parts subsequently secured in apposition by nails of bone or metal driven into the fragments. And in two of these cases complete bony union resulted; and in several, the nails of bone disappeared entirely by absorption.

The anatomy of the neck of the femur occupies ten pages, following which the author gives a description of the different varieties of fracture liable to occur, both intra and extra-capsular, occupying seventeen pages. The next ten pages are occupied with a consideration of the causes of fractures of the neck of the femur, including senile osteoporosis. After giving a very plain and interesting account of the symptoms and diagnosis of fractures of this part of the bone, the author enters upon the consideration of the production of callus. This is perhaps the most interesting and exhaustive part of the monograph. Having assumed that bony union can take place and in many instances has done so, after true intra-capsular fractures, he enters upon a thorough study of all the more recent investigations on this part of the subject, both in this country and Europe. The last ten pages of the monograph are occupied with a concise statement of the author's views regarding the treatment of the variety of fracture under consider-

ation. The reader will find in the 113 pages of the pamphlet before us, clearly and concisely stated, the results of a most extensive and impartial study of the long controverted questions concerning the results of intra-capsular fractures, to which the author has added much valuable, original matter of his own development.

Dr. Senn is a patient, accurate, and thorough investigator, with the happy faculty of expressing his thoughts in language both concise and elegant. And the present monograph merits a place on the table of every practitioner, whether physician or surgeon.

DOMESTIC CORRESPONDENCE.

Richmond, Ind., May 22, 1884.

CHAIRMEN OF SECTIONS.

At the recent session of the Association there was not time for all the chairmen of the Sections to read, in the general morning meetings, the address the plan of organization requires them to prepare for the occasion, and more than one of the excluded manifested a sharp sense of disappointment. There are now seven Sections, and the programme assigned two of the addresses of chairmen for Wednesday morning, two for Thursday and three for Friday morning. By a misapprehension of the law these addresses are usually an hour long, instead of forty minutes, and as the morning meetings are practically limited to three hours, the days on which two addresses are delivered have two-thirds of the time of meeting consumed by them, and on the day that has three assigned they would occupy the entire time, except it be on Friday when, without Section meetings in the afternoon, the general session may occupy as much of the day as its business requires. But the situation then has this drawback: so many of the members have departed for home or to look after outside affairs that there is left a formidable array of empty seats, which have a depressing influence on the reader of a paper, wherein he has with his best ability incorporated his richest ideas of a year's earnest cultivation in a special line.

True, these unread addresses are to be published the same as if they had been read, but this does not satisfy the chairman who has the reasonable ambition to present his own thoughts in person to his assembled confreres and enjoy the pleasurable inspiration of the moment.

The first four of these addresses, the two on the second day of the session, and the two on the third are usually read, and to audiences respectable in numbers; but those set for delivery on the fourth day have to be referred for publication unread, or delivered to scant and too often inattentive audiences. The situation this year was, therefore, not unlike that of other years. This in nowise, however, lessens the chagrin of those who, this year, were denied the privilege of reading these addresses.

For this disagreeable state of affairs there should be a remedy. What shall it be? We cannot now alter the law regulating this matter, and must seek what relief can be found within its purview. Fortunately this is much; the controlling regulation is this: "The chairmen of the several Sections shall prepare and read in the general sessions of the Association, papers on the *advances* and *discoveries* of the past year in the branches of science included in their respective Sections, the reading of such papers not to occupy longer than *forty* minutes for each." Great relief will come from a strict observance of the forty minutes limitation. Many of these addresses have occupied an hour or more in delivery. Let the committee fix an hour for the reading of the first address, fix the time for a second forty minutes later, and for a third forty minutes after this; give this arrangement the force of a special order and see that it is adhered to. This allots two hours for three papers on Wednesday morning, the time usually consumed by two. The following morning three more of the addresses could be read under like provisions, and this would leave but one to be read on the morning of the last day, for which time could certainly be spared.

Doubtless some chairmen will object to a restriction to forty minutes, but as that is the law under which they took service they should voluntarily conform to it, and if they do not the presiding officer should cut them off, each when his time is out, though his address be not finished, and give his successor his right of a hearing. Proper regulations, judiciously carried out, is the only feasible way of conducting successfully the business of a large assembly of men who have multiple affairs to consider and decide. Moreover there is small doubt that any chairman of a Section who knew in advance that his reading would be limited to forty minutes would prepare his paper to conform to that necessity.

It will be observed that another obligation of the chairman is that his paper to be read before the general session of the association shall be on the advances and discoveries of the past year in the branches of science included in the section of which he is chairman. This obligation is both significant and important and it is deemed safe to say that no chairman can ignore it and give entire satisfaction to the association. It is obvious that in adopting this regulation it was the purpose of the association to secure to itself annually the improving and enjoyable opportunity of listening to an intelligent résumé of a year's progress of medical science in the departments severally confided to the Sections, the presumption being that each chairman would, immediately on his appointment, devote himself to a careful scrutiny of the current literature of his department to be continued through the year and then sum up so much of the most important matter contained in his notes as could be intelligently presented to the association in forty minutes. This presumption has not always been realized, and there were some notable failures at the late session. But it is a fair conclusion that if the doctors who have had the honor of chairmanships conferred on them this year, realize how unsatisfactory were the addresses that did not conform to the law, there will be no failures in this behalf at New Orleans.

J. F. H.

THE ACTIVE AGENT IN JEQUIRITY INFLAMMATION.

Erroneous impressions about the influence of microbes is greatly to be deprecated, and by no one is this more keenly felt than by those who sincerely wish to give the microbe its due influence either for the weal or woe of the human race. It is consequently with regret that we find in the address of the Chairman of the Section of Practical Medicine of the American Medical Association, that the influence of the jequirity is said to be of special importance because "in it we have pressed into our service the ubiquitious microbe, which is receiving at present so much attention." See address Vol. I, No. 19, p. 517. This position taken by Sattler, and supported by Cornil and Berlioz, has been so completely overthrown by Neisser, of Berlin, and Salomonsen and Dirckinck-Holmfeld, of Copenhagen, and the question itself is of such intrinsic interest, that whilst the matter is fresh before the minds of the profession, we venture to offer to the JOURNAL an abstract of these critiques on Sattler's work, which we published in *Weekly Medical Review* of April 5.

The examination of Sattler's work was undertaken both in Breslau and in Copenhagen. In both cases the results furnished conclusions absolutely different from those advanced by Sattler. Dr. Neisser, who conducted the experiments made in Breslau, claims that the statement that inflammation is due to bacteria is not yet proven, and that the claims of Sattler do not correspond to the facts. If, says he, the inflammation is due to bacteria, then must the following conditions hold: 1. There must be a distinct species of bacteria in the infusion. 2. Without bacteria the infusion will be inactive. 3. The bacteria of pure culture should at least have the same activity as the fluid containing the bacteria. 4. In the pathological product developed, conjunctival secretion and exudate, the infecting entity should be found and then when transferred to the conjunctiva of another animal the same affection should be developed.

As a matter of fact relative to the first condition, there does exist in the infusion, as usually employed, a well-marked form of bacteria, which flourishes so abundantly that other forms are altogether in abeyance; but that the specific action of the infusion is to be attributed to this bacillus, after repeated and varied experiments Dr. N. positively denies. He thus formulates the results of his observations: 1. An infusion which is free from bacteria exhibits the same activity as that which contains bacteria. The infusion was made so as to be free from bacteria, by the rigid observations well known to those acquainted with that kind of work. So long as the infusion was kept free from bacteria it remained active, but lost its activity after the development of the bacteria. 2. The use of the bacilli of pure culture, in order to produce the characteristic ophthalmia, was powerless. The bacilli were introduced into the conjunctiva in large quantities, and often without any characteristic results. 3. I have never found in the secretions from the eyes affected with the jequirity inflammation, nor in the diphtheritic membranes, any evidence of the bacillus. Micrococci I have found, but the characteristic bacillus, never. 4. The application of the ophthalmic secretion to an eye not affected, produces no inflammatory action. Dr. N. believes that the peculiar action is due to a substance existing in the bean, which the chemists who have hitherto investigated the question have not been able to isolate—an amorphous ferment.

The subject is also taken up at length, and published in the same number of the *Fortschritte der Medicin*, from which we have extracted the above, by Dr. C. J. Salamonsen and M. Dirckinck-Holmfeld, in Copenhagen. Here observers also found that an infusion made with all due precautions, remains perfectly clear and active practically indefinitely, as long as the bacteria are prevented from disturbing its influence.

On the question of the existence of bacilli in the secretions and exudations, they say: We could not find, either in the pus or in the diphtheritic layer from the conjunctiva, when examined under the microscope, any bacillus. Sometimes we found micrococci in the secretions. The membranes and pus, moreover, were taken from the eyes, and an effort made to cultivate any special bacillus which might be present; but though certain forms of bacteria developed, the special form which dominates in the infusion under favorable circumstances, never presented itself.

Pus was also taken by these observers from the afflicted eyes, and an effort made to excite a similar affection in a healthy eye, but without producing anything more than the faintest conjunctivitis.

The characteristic bacilli of pure culture were, without any effect, rubbed into the conjunctiva also by these observers, and their conclusion naturally was, that the effect was due to a special proximate principle existing in the jequirity bean; and their further efforts were directed to establish their belief, or convince them of their error.

Their observations showed them that the active principle was insoluble in alcohol, chloroform, benzine and ether; that it was comparatively slightly soluble in water, but very soluble in glycerine. They were unable to extract any alkaloid, and expected the presence of an amorphous ferment. To establish this point, the jequirity seeds having been ground up, the powder was treated with ten times its weight of pure glycerine, rubbed up well and allowed to stand for twenty-four hours, filtered, and then precipitated with five times its volume of alcohol. This precipitate was again treated with the necessary means for purification, and the result, dissolved in both water and glycerine, gave the characteristic jequirity inflammation.

The smallness of the amount of the active principle necessary to produce the inflammation is very striking. The glycerine solution which corresponded to the one hundred-thousandth part of a gramme, developed the characteristic inflammation, but one-half the quantity produced no effect.

These two investigators thus sum up the result of their observations:

1. The jequirity inflammation is not the result of bacteria.

2. It is the result of an active principle in the seed, soluble in both water and glycerine, but insoluble in alcohol, chloroform, ether and benzine; and destroyed by a temperature of from 65° to 70° C., if sustained for an hour.

3. The quantity of the active principle contained in the one hundred-thousandth gramme of jequirity seed develops a well marked conjunctivitis. The poison, when injected subcutaneously in mice or frogs, quickly kills.

We have given this much space to this question because of its intrinsic interest. It is not likely that a substance as active will, in these days of rigid investigation, be confined to observation on trachomatous eyes. The investigators above referred to have not yet given a name to the amorphous substance which they extracted, but as we are likely to hear from them again on this subject, we have no doubt they will suggest some appropriate appellation. The bacillus, in this case at any rate, has to take a back seat.

R. TILLEY, M.D.

Chicago.

FROM WASHINGTON.

MATTERS OF MEDICAL INTEREST BEFORE CONGRESS.

May 9.—The bill (S. 1,044) to establish a University of original research and of medicine, as a part of the Smithsonian Institute, for the advancement of science and the discovery of improved methods of treatment and cure of disease, was brought up before the Senate by Mr. Call, of Florida. The bill is about the same in text as already referred to here, but now it is proposed to connect it with the Smithsonian Institute. Mr. Call made his speech, which was a long one, and, as he says, expressed the thoughts of others upon pretty much the whole range of scientific research that medicine could possibly embrace. The bill was not discussed, nor has there as yet been any disposition made of it.

May 12.—The petition of the American Medical Association, praying that proper provision be made for the prevention of epidemic diseases in the United States, was presented in the Senate, and referred to the Committee on Epidemic Diseases. The petition was presented in the House on May 14, and similarly referred.

May 14.—To the resolution directing the public printer to publish extra copies of the *Medical and Surgical History of the War of the Rebellion*, etc., the text of which is given on p. 529, was added "or for the volumes already published, or to be published hereafter, of the Index Catalogue of the Library of the Surgeon General's Office." This was agreed to, and the further statement made by Mr. Hawley that the public printer will undoubtedly prepare a little circular, or brief statement, giving the price, so that those who wish to obtain these documents have only to write to the public printer, and, on ascertaining the price, which to them will be 10 per cent. above the cost of paper and press-work, send the money with the order, and wait until an edition is struck off. There is, I believe, no fixed price for the *Medical and Surgical History*, which is sold here by second-hand book-dealers at $5.00 per volume. The Index Catalogue is valued at $2.00 per volume.

NECROLOGY.

BEALE, JAMES SHEILDS, M.D., of Washington City, was born in this city November 14, 1841; died suddenly of apoplexy, in the parlor of Providence Hospital, February 12, 1884, where he had gone to perform an important operation.

He was the son of Robert Beale, and was born in the old Read mansion, corner of B. and Pa. Ave., S. E. The doctor left college without the knowledge of his parents, and joined the Confederate Army at the outbreak of the war between the States. On the restoration of peace, he studied medicine, and graduated M.D. from the Medical Department of the University of Georgetown in 1859. Afterward he visited Europe, and took special courses in Paris, London and Vienna. Returning to Washington, he opened an office in the house where he was born, and speedily acquired a good practice. His preference was for surgery, and at the time of his death he was ranked among the leading surgeons of the city. Besides a large private practice, he was on the surgical staff of Providence Hospital, and had been connected with that institution for over ten years. He filled the chair of Anatomy of the Medical Department of the University of Georgetown from 1876 to 1883, when he resigned. He was a trustee and a member of the teaching Faculty in the "Washington Training-School for Nurses." He was a member of the Medical Society of the District of Columbia, of the Medical Association of the D. C., and the Gynæcological Society of Washington. These bodies held meetings and passed appropriate resolutions of regret, as did the staff of Providence Hospital and the students of the medical department of Georgetown University. Dr. Beale occasionally read papers before the Medical Society of the D. C., and contributed papers to medical journals. He was a man of cultivated manners, of sympathetic disposition, and untiring in his efforts to benefit his patients, and they were devotedly attached to him.

The doctor leaves a widow and three children. His funeral took place from Ascension church, the Rev. Dr. Elliot officiating. His remains were placed to rest in "Oak Hill cemetery." The funeral was attended by a large number of physicians and a great concourse of friends.

J. M. T.

JEROME, JAMES H., M.D., of Saginaw City, Michigan, was born at Cochecton, Wayne county, Pa., Sept. 28, 1812, died at his residence in Saginaw Aug. 8, 1883. His parents removed to Michigan when he was a lad about 15 years of age, and his father died three years later. He attended a district school, and had one year's tuition at the Ovid Academy. The limited means of the family compelled the youth to largely rely upon his own resources. He

learned the trade of a hatter, serving an apprenticeship, and followed the business until 1834. A fondness for study led him to a desire for a still higher education. After giving some time to the study of Latin he began reading medicine with Dr. Moses Tompkins, near Hector, N. Y. He attended the Geneva Medical College in the winter of 1834–5, and while there was fortunate enough to attract the attention and secure the friendship of Willard Parker, Professor of Anatomy and Physiology. He then attended a course of lectures at Pittsfield, Mass. At the invitation of Dr. Parker he returned to Geneva, and acted as his assistant in preparing cases for illustration in the lecture-room. Dr. Jerome graduated from Geneva Medical College in 1837. Immediately after obtaining his degree he began practice at Trumansburg, N. Y., where he speedily acquired business and held positions responsible in medical societies.

In 1855 he received the Honorary Degree of M.D. from Hobart Medical College, and in the same year was elected Professor of Anatomy and Physiology to his *alma mater*. In 1858 he was appointed Physician-in-Chief of the Marine Hospital at the port of New York. He then retired from the chair in Geneva Medical College and entered upon his duties in the Marine Hospital in 1859, but shortly afterward resigned in consequence of difference of opinion with the Commissioners of Immigration, and returned to his former field of labor at Trumansburg. In 1839 he was married to Lizette Atwater, of Perry, N. Y. Eight children blessed this union. Mrs. Jerome died in July 30, 1863. In 1865 Dr. Jerome removed to Saginaw, Mich., and married Calista Allen. In his new home he engaged extensively in manufacturing lumber, but never lost his interest in the healing art. In 1866 Jerome assisted in organizing the Michigan State Medical Society, and was always earnest in his support of regular medicine. He was a member of the Board of Councillors of Detroit Medical College, and its President from its organization. The Board passed appreciative resolutions after his death. The physicians who attended his funeral also joined in a series of resolutions of respect for his memory, which have been published in the Association journal of August 1883, p. 223. (From notes furnished by W. F. Breakey, M.D., of Ann Arbor). J. M. T.

MISCELLANEOUS.

NEW BOOKS.

Le Gendre, P. Contribution au diagnostic du chancre syphilitique de l'amygdale. 8vo., 344 pp. Paris: Davy.

Leroy, C. J. A. De la kératoscopil, on de la forme de la surface cornéenne déduite des images apparentes réfléchies par elle. 8vo, 15 pp., avec., 7 fig. Paris: Davy

Maigret, M. J. De la créosote en thérapeutiqul. Injections sous-cutanées de peptone créosotée. 8vo., 47 pp. Paris: Davy.

Millet, J. Des vertiges chez les aliénés. 8vo, 31 pp. Paris: Boudet.

Moncorvo. Traitement du spina-bifida par les injections iodoglycérinées. 8vo, 19 pp. Paris: Davy.

Moreau-Marmont. Memoire sur l'hémorrhagie consécutive à l'extraction des dents. 8vo., 40 pp. Louis: Bousrez.

Renault, P. Lésions congénitales et acquises du cœur, rétrécissement congénital des orifices artériels, persistance du trou de Botal, lésions mitrales, pas de cyanose. 8vo., 11 pp, avec 2 fig Paris: Davy.

Reverchon, A. Contribution à l'étude de l'atrophie musculaire progressive, typeorau, Duchenne. 8vo., 42 pp. Paris: Davy.

Ruyssen, G. C. A. De l'ergotine dans le diabéte sucré. 8vo., 36 pp. Paris: Davy.

Sénac-Lagrange. De la nature des dyspepsies et de leurs conditions vitales dévoilées par les eaux sulfureuses, notamment les eaux sulfureuses de Cauterets. 8vo., 23 pp. Paris: Hennuyer.

Ebstein, Wilhelm. Corpulence and its Treatment on Physiological Principles; translated and adapted for popular reading by Emil W. Hœber, M D. 4to, 51 pp. New York: Brentano Bros. Paper, 50c.

Ranney, Ambrose L. The Topographical Relations of the Female Pelvic Organs. 8vo, 121 pp. New York: W. Wood & Co. Cloth, 75c.

Tait, Lawson. The Pathology and Treatment of Diseases of the Ovaries; being the Hastings essay for 1873. 4th edit., re-written and enlarged. 8vo, 357 pp. New York: W. Wood & Co. Cloth, $3.50.

OFFICIAL LIST OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT UNITED STATES ARMY, FROM MAY 17, 1884, TO MAY 23, 1884.

Sternberg, Geo. M., Major and Surgeon, relieved from duty in the Department of the East and ordered to report to the Surgeon-General of the army for temporary duty. (Par. 2, S. O. 115, A. G. O., May 17, 1884.)

Magruder, David L., Lieut.-Colonel and Surgeon, ordered to be relieved from duty as medical director, Department of the Missouri, and to proceed to Philadelphia, Penn., and assume duties of attending surgeon and examiner of recruits in that city

Fryer, Blencowe E., Major and Surgeon. From Department of Missouri to Department of Dakota.

Ewen, Clarence, Captain and Assistant-Surgeon. From Department of Missouri to Department of Platte.

Strong, Norton, 1st Lieut. and Assistant-Surgeon. From Department of Platte to Department of Missouri. (Par. 7, S. O. 115, A. G. O., May 17, 1884.)

Wilson, George F., 1st Lieut. and Assistant-Surgeon, ordered to proceed to Fort Canby, W. T., for temporary duty at that post, relieving Assistant-Surgeon, W. O. Owen, Jr., U. S. A., who will report in person at these headquarters for further orders. (Par. 5, S. O. 62, Hdqrs. Dept. of Columbia, May 12, 1884.)

LIST OF CHANGES IN THE STATIONS OF MEDICAL OFFICERS, U. S. NAVY, FOR THE WEEK ENDING MAY 24, 1884.

Assistant-Surgeon W. Martin, ordered to U. S. Str. "Constellation."

Medical Inspector H. C. Nelson, granted leave of absence for one year.

P. A. Surgeon L. B. Baldwin, detached from U. S. Str. "Pensacola," and "waiting orders."

Surgeon H. M. Wells, ordered to Naval Hospital, Brooklyn.

P. A. Surgeon J. M. Murray, detached from U. S. Str. "Minnesota," and ordered to U. S. Str. "Passaic."

P. A. Surgeon J. R. Waggener, ordered to U. S. Str. "Hartford."

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THE AMERICAN MEDICAL ASSOCIATION

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—THE—

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ORIGINAL ARTICLES.

REPORT ON THE ADVANCES AND DISCOVERIES MADE IN THE STUDY OF CONTAGIOUS AND INFECTIOUS DISEASES.

BY WILLIAM LEE, M.D., BALTIMORE.

Address of the Chairman of the Section on Diseases of Children, May, 1884.

Opposed to specialties as they are generally practiced, as many of the best and wisest in our profession are, it must be admitted, nevertheless, that the formation of a Section on Children's Diseases by this Association was eminently proper, for not only has our example been followed by the British Medical Association, as shown at its last meeting, when a similar Section was inaugurated, but in these days, when the question as to division of labor in the science of medicine, as well as in other fields of human labor, is engaging so much attention, Pediatrics must sooner or later be allowed to hold that independent position which it deserves. This fact we are made to appreciate very forcibly through the leaves of the *Archives of Pediatrics*, lately started in our country, to which I hope each member of this Association will give his support. It is now four years since the establishment of this Section, and we believe the good effects to be derived are indisputable. Certain affections are met with in children only, and there are others common it is true to every period of life, but which are modified in peculiar ways when they occur in childhood.

The laws of the Association require the chairman of a Section to prepare and read in general session a paper, the reading of which shall not occupy more than forty minutes on the advances and discoveries in the branches included in his Section.

The contributions to medical literature in the Section over which I preside during the past year have been so numerous and important, that were I to attempt the complete review I would require more time than has been allotted me, and, possibly, not do full justice to those special diseases which are now claiming so much attention. I have therefore thought best to confine my report entirely to the infectious and contagious diseases of children, and in order to give as complete a review as possible, have deemed it wise to go back of the present year, particularly as at the last year's meeting no written report was presented.

DIPHTHERIA.

Dr. Carpenter[1] on the etiology and treatment of diphtheria, endeavors to show how by analogy diphtheria and potato-disease may be allied to each other, and then after mentioning the influence of sudden rise and fall of temperature, effects of sewers, impure milk, etc., gives facts to prove how the germ upon which he believes diphtheria to depend for its development, may be suddenly brought into activity, particularly amongst the poor, who allow their families to remain on wash-days in the steamy atmosphere of the rooms in which they not only do their work but likewise sleep.

He sums up this part of his article by classifying the conditions necessary for an outbreak of diphtheria under five heads:

1. The presence of certain forms of excreta.
2. Of an elevated temperature not much below blood heat, but below that requisite for the coagulation of albumen.
3. Of an atmosphere saturated with moisture, and probably also with (4) an excess of carbonic acid, or some other acid in the air by which the growth of the germ is determined, and (5) some other meteorological or electric manifestation at present entirely unknown.

For the treatment of this disease ammonia is recommended very highly, on account of its stimulating effects, to reduce acidity of the blood, and because it has been found in a number of cases of diphtheria that there is a rheumatic or gouty diathesis. In combination with the ammonia, lithia or potass. is generally given, and when there is an elevated temperature, he at once prescribes the sulpho-carbolate of soda, with the greatest possible benefit.

I would urge, says he, practitioners to continue the sulpho-carbolate in small doses, first with ammonia, and after a time with quinia, avoiding altogether the mineral acids—as such appear to allow of a more rapid development of the resting spores and a further relapse. For local treatment he strongly advocates washed sulphur, blown into the throat or by means of a brush with glycerine or honey.

While not being able to testify to the good effects of the internal treatment mentioned by Dr. C., I can bear testimony to the good to be derived from the local application of sulphur, particularly if used in the combination as first suggested by Dr. James

[1] *London Lancet*, Sept. 15, 1883.

Reed, of Savannah—which some of you may remember my calling to your notice last year. It is as follows:

℞ Resorcin .....grs. xxiv.
Tannic acid.....℥i.
Salicylic acid.....℥iv.
Boracic acid.....℥ii.
Flor. sulphuris.....℥ss.

M. ft.—Chart one. The above suitable for a child 4 years old.

S.—A small quantity to be placed on base of the tongue every two or three hours.

At the same time the powder is used, Dr. Reed gives resorcin internally, and believes it acts better than quinine in the treatment of diphtheria.

Dr. Henoch[1] considers that the undue way specifics are claimed for diphtheria, arises from its being confused with other diseases which it simulates.

Noticeable among these are cases of croupous angina, which in the first stage of the disease it is often difficult to distinguish from diphtheria. Specific diphtheria and non-specific croupous pharyngitis have also certain elements of difference, but they are not detectable in every case. The latter disease usually begins with violent fever, while the former ensues slowly with a moderate amount of fever.

In the non-specific oftener than in the specific there is in the beginning an invasion upon one side only, twenty-four to thirty-six hours elapsing before both sides are involved. The fact of the disease extending to the velum, particularly if the posterior pharyngeal wall be also attacked, makes the probability very strong that we have to deal with true diphtheria. But, after all, the condition of the nasal mucous membrane furnishes the chief criterion, for in the non-specific croupous form it is never attacked, while in the specific form it is almost invariably attacked.

Albuminuria is too often absent in diphtheria to be considered of importance in making a differential diagnosis. The author concludes by saying that although the scarlatinous form of diphtheria may follow quickly specific diphtheria, or *vice versa*, he is firmly convinced they can be differentiated.

Dr. Reese[2] has advised for the treatment of
theria a solution of bi-chloride of mercury in the proportion of one grain to four ounces of rain-water.

He orders the patient, if old enough, to gargle and rinse the mouth every two hours, and take afterwards internally a teaspoonful; should the disease be very severe, it must be done every hour. Within fifteen or twenty-four hours the exudation will disappear, but will return unless the remedy is continued. This treatment must be kept up for a week or longer, the strength of the gargle and frequency of use being regulated by the effects produced, namely: nausea, vomiting or purging. As long as the system is suffering from the poison, these symptoms will be absent. It is probable that the benefit arising from the bi-chloride is due to its influence upon bacteria, as demonstrated by Sternberg, and also to the remedy being rich in chlorine.

[1] Resumé in Jahrbuch, f. R. u. p. E. B. xx. H. Q.
[2] *Jour. Am. Med. Ass.*, Nov. 1, 1883.

Dr. Selldon[1] uses the cyanuret of mercury, one centigramme to 100 grammes of water—dose, two teaspoonfuls internally every hour day and night. Also, when children are old enough, allows them to gargle with a similar solution. In 1881, five cases were treated in the above manner, and four recovered; 1882, thirty-two, with only two deaths. Among those who recovered there were few paralytic sequelæ.

He also treated 200 cases of angina of the tonsils and fauces with the same solution, and always with good results. They were all treated with mercury upon the supposition that diphtheria might develop. As adjuvants to this treatment, he employed ice internally and externally, and when it could be borne, free stimulation. The latter procedure he considers very necessary in view of the danger of heart failure.

SCARLET FEVER.

Mr. R. W. Mullican,[2] in a paper on the Ætiology of Acute Specific Disease, and also in an article by Dr. John Meredith, some evidence has been brought forward to show that scarlatina may be evolved from diphtheria. The latter states, that towards the end of June, 1882, cases of illness of undoubted diphtheritic character occurred in the district of Wellington, Somerset county, London, where there neither was nor had been a case of scarlet fever for many months. Some of the earliest cases of diphtheria were very mild, and to this variety belonged the case of a housemaid in a family attended by him. This girl went one afternoon toward the end of June to see her father, who, it was found afterwards, suffered at the time with sore throat, but its specific nature could not be discovered, because he was not treated by a medical practitioner. A few days after this visit the girl became ill, and refused food, but made little complaint, and did not give up work, recovering in a day or two. Before being entirely well, her fellow-servant, the cook, was taken sick with sore throat and general weakness—upon examining her throat, several diphtheritic patches were found on the tonsils, which soon disappeared, and recovery followed, under treatment of tinct. iron, nitric acid and chlor. potass. gargle. The two servants occupied the same bed. In the house were three children, aged 8, 7 and 6, who passed much time with the cook, but this was stopped, as soon as the character of her illness was discovered.

However, on July 1, the oldest, a girl, complained of headache, sore throat, heat of skin, and some gastric irritation. On examination of her throat, it had a peculiar florid appearance, but no diphtheritic exudation. At the end of another day, scarlet fever rash came well out all over the body, and the case progressed favorably, with exception of much irritation of the bladder. The urine was found alkaline, of low specific gravity, and free from albumen.

On July 2, the youngest, also a girl, complained of head and ear-ache; was quite feverish, throat red, but no diphtheritic patches could be found; her condition resembling that of her sister, only there was not so much urinary irritation, and the rash was

[1] Archives of Pediatrics, No. 2, 1884, Jahrb. f. Kindhldke, B. xx. H. 4.
[2] *Lancet*, May 26, 1883.

more general, with higher temperature. An ulcer formed in her ear and discharged for some time.

On the 6th, the third child, a boy, age 7, was taken sick much in the same way as his sister, (she had been isolated from them for some days) and in due course the scarlatina rash came out all over his body in quite a typical character. This case proved a very mild one. At the time he was taken ill his mother became sick, her sickness beginning with a rigor, aching all over her body, and high temperature, which continued for several days. She had violent headache and free perspiration at intervals which left her prostrated.

Her throat had a reddish blush; nothing else. There was no rash anywhere over her body. Her illness in this case appeared to be diphtheria without the tonsil exudations that are usually seen, (possibly because she used freely antiseptic gargles). She had had scarlet fever in early life.

In conclusion, he forms the opinion that these cases of scarlet fever are evolved ones, a correlative out-come, and not the immediate result of contact.

In a very interesting article Dr. Oxley attempts to show that scarlet fever is not a very infectious disease, during the first two or three days, and says that such is the case, may be easily explained, if we only accept the theory that the fever depends upon specific germs being introduced into the body and bred there, and only becomes infectious after they are reproduced in the host and thrown off, either from the skin, throat or other secreting surfaces. There are exceptions where the disease when present, even in a very mild form, may prove infectious very early in the illness; but this is probably due to the fact that owing to the initial symptoms being mild this disease is only discovered after making considerable progress. In alluding to the possibility of the medical man carrying the requisite quantity of the poison, says, I have often been told that "you doctors carry fever in visiting from case to case." A friend of mine who has always something *apropos* to say when a remark of this kind is made, replied, "If we did so, we should have a great deal more doctoring to do." And this is true; for if the infection was carried by medical men, think for a moment how great the spread of fever would be.

He next alludes to the complication of rheumatic fever, a complication which has a very great pathological interest owing to the fact that it is a grafting of another disease. Rheumatic fever he says may come on during the course of scarlet fever as early as the sixth or eighth day, or during convalescence, when we think our patient doing well.

In speaking of the treatment in this complication the doctor strongly interdicts the use of the salicylates, because the skin and kidneys are both desquamating and not in a fit condition to be called upon to do any extra work. He relies upon quinine and tinct. of perchloride of iron in small doses, with application of a blister over the heart, where it is affected; or if they are contra-indicated, carb. ammo. and chlorate of potash in small but repeated doses.

[1] The *Lancet*, Oct. 27, 1883.

Tonge Smith[1] from an experience in treating 2,000 cases of scarlet fever, observed within the last three and a half years, has become convinced that the incubation period does not last more than three days.

Liechtenstein,[2] on the treatment of scarlatina, says that while his remarks are based upon an extended observation he has no new theories to advance.

The chief means on which he relies are cold baths, administered from the time the exanthem is well developed. He usually immerses the child from ten to fifteen minutes.

The antipyretic action of the baths becomes manifest not only in the reduction of temperature, but in the lessening or the ending of delirium, steadying of the heart's action and decrease of frequency of the pulse, with relief of dyspnœa, etc. While recommending very highly the cold water treatment, he gives five conditions which contra-indicates its use. (1) Cardiac collapse, or a tendency thereto. (2) Laryngeal stenosis, with diphtheria complications. (3) Inflammatory swelling and infiltration of the cellular tissue of the neck with venous obstructions. (4) Possible hæmorrhage from diphtheritic inflammation extending to the pharynx and nasal cavity. (5) The severe form of polyarticular synovitis and scarlatinous tendonitis, in which the slightest movements are painful.

Quinine the author has found less reliable as an antipyretic, and not without danger in children, on account of the possibility of quinine collapse. If given, it should be in small and rather frequent doses.

The author considers salicylate of soda far more reliable as an antipyretic, and gives it in half-gramme doses at intervals of half an hour, until the fever is controlled. He thinks its supposed unfavorable effects upon the heart are imaginary. For nourishment, milk, eggs, gelatine and nutritious soups are prescribed. If stimulants are necessary, they should be given in the form of red wine, cognac or champagne. Counter-irritations and massage are also beneficial.

CEREBRO-SPINAL FEVER.

Dr. Smith[3] in an exhaustive paper on the Etiology, etc., of this disease, reports as follows, that, according to Lyden and E. Sandier, micrococci seem to be associated with the cause of this disease, but proof is wanting that this germ bears a causative relation to it.

As it occurs in localities where the diet is to a great extent dissimilar, particular kinds of food have no influence as a cause.

Medin thinks that the infectious material is absorbed by the lymph-spaces of the nasal mucous membrane; which, according to Key and Retzius, communicate on the one side with the atmosphere through openings between the epithelial cells, and on the other side with the sub-arachnoid spaces at the base of the brain.

[1] *Brit Med. Jour.*, page 1,152, 1883.
[2] Rev. mens. des Mal. de l'E., Dec., 1883.
Archives of Pediatrics, vol. 1, No. 2, 1884.
[3] *New York Medical Record*, 1883. Nov. 24; Dec. 1, 8, 15, 22.

In winter a greater number of epidemics occur than at any other season, on account of overcrowding and poor ventilation.

Causes which predispose to this disease are anti-hygienic unsanitary conditions, overwork, lack of sleep, prolonged abstinence from food; followed by over-eating indigestible and improper food.

In children who worry over their studies, and are easily chagrined at being reprimanded or punished, there seems to be an especial liability to attacks of this disease.

(I have met with three cases during the past winter, when this was positively demonstrated.)

Males are more frequently attacked than females.

Symptoms.—In the 36 cases tabulated, the disease showed itself between midday and midnight, beginning with violent headache, vomiting and aslight chill, but usually without any premonitory symptoms.

In children, clonic convulsions take the place of the chill. Stupor or coma follows, and when the patient can be aroused, complaint is made of pains in the trunk and extremities.

The pupils are dilated in the early stage of the disease, or less frequently contracted, and if the attack be severe, they respond to light feebly, or not at all.

Pain in the head is very sharp and lancinating during the first week.

In children the pulse is more or less accelerated.

The respiration is proportionately faster than the pulse, which fact, possibly, is owing to tonic contraction of the abdominal muscles.

Temperature.—Although the surface does not indicate it, the temperature is above normal. Wunderlich has recorded one or two severe and fatal cases when the temperature was as high as 110°.

Tonic contractions of the cervico-occipital muscles and back begin in all typical cases from the first to the third day, but to a less degree in those of the abdomen or lower extremities.

The hearing may be entirely lost, and not regained, as the result of otitis media.

Urine contains occasionally a small quantity of albumen.

Complications.—Croupous pneumonia and arthritic rheumatism are the most frequent and fatal. Strabismus is common.

Sometimes the sight of one eye is completely destroyed by inflammatory changes.

Nature.—Evidence is strongly in favor of its being a constitutional malady, with meningitis as a local manifestation.

Anatomical Characters.—The most common abnormal appearance of the blood observed at the autopsies is a dark color, with unusual fluidity and some dark clots; the meninges of the brain and cord are hyperæmic, with exudations of serous, fibrinous and purulent nature.

The brain is softened; ecchymoses are present.

Prognosis.—Patients who live beyond the first week without serious complications will probably recover.

Numerous and large petechial eruptions show a profoundly altered state of the blood, and are therefore a bad prognostic, and so is continuous albuminuria. Under the age of five and over that of thirty the prognosis is less favorable than between these ages.

Diagnosis.—Owing to the nature and severity of its symptoms, and the suddenness of its attack, cerebro-spinal fever may be mistaken for scarlet fever, and *vice versa*. From the common form of meningitis ordinarily there is no difficulty. Continued fever, typhoid or typhus, somewhat resembles cerebro-spinal fever, but it lacks the muscular contraction and rigidity which characterize the latter.

Treatment, Prophylactic.—All measures looking to a good hygienic and sanitary condition must be strictly enforced during an epidemic.

Curative.—Efforts must be made at once to relieve the intense inflammatory congestion of the cerebral and spinal meninges. For this purpose bags or bladders of ice answer well; they should be used over the head and nucha.

In convulsions, hot mustard foot-baths.

For internal treatment, large and frequent doses of the bromides and ergot stand at the head of the list.

When headache is severe, and there is much restlessness, opium and chloral.

In the latter stages of the disease, iodide of potass.

The doctor concluded by saying that no disease requires more urgently kind, intelligent and constant attendance night and day.

TYPHOID AND TYPHUS FEVER.

[1]Amongst the various forms of typhoid fever which occur in children, it is scarcely necessary to insist upon the importance of diagnosing the transient variety which so frequently escapes observation.

The premonitory symptoms are so vague, and the headache, restlessness at night, constipation and fever are so ill defined and so slight that it is no easy matter to discover them. When the affection is once declared, however, it remains for some time, the chief symptom being that the child does not sleep, whilst the tongue is somewhat red, and the abdomen is slightly swollen.

The spots are often difficult to see on account of the local applications which have been employed; but at a later stage the fever become well defined with morning remissions until the fifteenth day, when the patient begins to convalesce.

Ashby[2] says typhoid fever more often aborts in children than in adults, that is the disease runs a course of two weeks instead of three or four.

The onset in the majority of cases is very gradual.

Temperature.—Morning remissions are greater than in adults.

Tongue not specially characteristic.

Abdomen as a rule is gradually distended.

Spleen can be felt in some cases.

Rose Spots seen in 39 out of 50, or 78 per cent., and are observed either on abdomen, chest or back.

Diarrhœa is slight.

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[1]*Practitioner*, June, 1882.
[2]*Practitioner*, June, 1881.

Complications are principally pneumonia, bronchial catarrh or bronchitis.

Hæmorrhages from the bowels are rare.

Relapses are by no means uncommon.

Mortality.—Barthez and Rilliet, Hillier, Gerhardt and others, place the death-rate of children from two to twelve years at 10 per cent.

During nine years in our hospital at Manchester, 265 cases have been treated, with twenty-one deaths, making a mortality of nearly 8 per cent.

Treatment.—Little medicine is required, excepting for the purpose of lowering the temperature, unless complications arise.

Tompkins,[1] in giving the clinical features of 164 cases of typhus fever seen by him in the last two years, says that 17 were in children under 10 years.

The initial symptoms in these were less pronounced, rigors being often entirely absent or unnoticed. Headache was usually the only thing complained of, which had accompanying it a rise of temperature seldom higher than 103°F. There was a marked difference in the mental symptoms from those of the adult. At the end of three or four days the patient became exceedingly torpid and lethargic, remained for hours in a dull, heavy sleep, as if under the influence of some narcotic, and could be roused with difficulty. This continued for from four to six days without much real or active delirium. During this time the temperature generally falls, gradually in some, in others more rapidly, becoming normal by the end of a week from its onset. They now would begin to brighten and go on to rapid convalescence.

Sometimes from the commencement of the disease there is a steady decline in the temperature.

The rash, which was not at all characteristic, varied in its occurrence, and in at least half the cases it was difficult to define any true rash.

A dirty mottling of the skin is frequently all, and is seen on the face as well as elsewhere; it is accompanied by a flushed look, and lasts only three or four days.

Prognosis is most favorable. All the seventeen cases recovered. Murchison gives the mortality under ten years as 35 per cent., and under five years 6 per cent. Lebert put it at 27 per cent.

Dr. Tompkins closes the article by calling attention to the great difficulty in making diagnosis when the epidemic commences among children.

MEASLES.

Dr. Meedigan[2] records three cases of insanity which occurred either during the course of, or in convalescence from measles. The youngest of those affected was 15, and the oldest 26 years.

Dr. Pellerean[3] calls attention to the influence of malaria during an epidemic of roseola and measles.

In many cases of roseola which appeared first, the fever would assume a remittent type, either preceding the rash for from two to eight days, or the rash would precede the fever. Then again, both fever and rash would declare themselves simultaneously. The severe symptoms noticed were headache, heat of skin, furred tongue and vomiting.

That the febrile disturbances were caused by malaria intervening, he thinks was demonstrated by the rapid reduction of the temperature under the influence of quinia. When fever subsided, sweating profusely set in, and, unlike what is the case both in roseola and measles, the temperature fell, and continued to do so when the rash appeared. The rash presented two distinct varieties. It was either uniformly red, not unlike scarlet fever, or consisted in small dots, slightly elevated above the skin, more or less disseminated at first, and then coalescing so as to form large patches, completely disappearing under pressure, and giving rise to itching.

Long after the fever had subsided, the eruption of roseola was often seen to persist, and to be followed by very little desquamation. Relapses were common, and an attack of it seemed to confer a predisposition to measles, especially among infants and children.

Like roseola, measles presented in its symptomatology most important modifications and variations. All classes and all ages were affected with it, except Chinamen. The incubation period varied from two to nine days.

There was entire absence of any prodromic stage, most cases being ushered in by fever, which soon assumed the intermittent or remittent type.

The rash, which appeared in a few days, had but little, if any, influence on the character of the fever.

Later in the disease, the spleen was often found more or less enlarged from effects of the malaria.

Besides the usual complications, there was congestion of the liver and hepatitis, both of which were ushered in suddenly with pain in the right shoulder, pain and tenderness in the right hypochondrium—vomiting, icteric tint, furred tongue and shivering. In some cases preceded by dysentery, and in others not.

With the exception of quinine, in most cases the treatment was upon a merely expectant plan.

Prof. Demme[1] in a report on an Epidemic of Measles and its peculiarities, mentions two cases, one a girl suffering from chorea, and the other a boy, 9 years old, suffering from prurigo—both of whom were freed of their respective diseases upon measles appearing; also that of a child three years old who had measles twice in ten weeks.

Dr. Keating[2] gives a very interesting report of a recent epidemic of measles, and in it calls especial attention to the following points, viz: the microscopic examination of the blood and the constant association of *micrococci* with the general manifestation of malignancy, (a condition already well known), and the gradual but positive amelioration of all bad symptoms by treatment, which was directed to the micrococci as the *fons et origo* of trouble.

The investigations were all carefully made with the assistance of Drs. Henry F. Formad and W. A. Edwards.

After giving the history of a number of fatal cases

[1] *Brit. Med. Journal*, Dec. 15, 1883.
[2] Journal of Nervous and Mental Disease, 1883.
[3] Dr. G. E. Pellerean, October (London) Practitioner.

[1] Jahrbuch f. Kindhlkde, B. 19, H. 2.
[2] Transactions of the College of Physicians of Philadelphia. Third series, volume vi.

with their post-mortem, the result of which showed death to be from the gradual forming of right side heart-clot, he asks the question, What causes it?

In January, 1882, No.—, *Amer. Journ. of Med. Sciences*, Dr. K. gave his experience in a number of cases of diphtheria, scarlet fever and measles, and at that time attributed the condition to an increase of fibrine, due to the rapid tissue-changes and the malignancy of the type of disease, and urged the importance of pushing an alkaline treatment from the start.

In these cases the microscope in Dr. Formad's skillful hand has shown that this condition is due to something more; for the moment the symptoms of malignancy appeared, examination of the blood demonstrated micrococci to be present in large quantities. These micrococci appearing coincident with symptoms of malignancy, all remedies should be addressed to check their development, and with this end in view he asked Dr. Formad what, in his experience, most readily arrested the growth of micrococci in his culture solutions, obtained from erysipelas, diphtheria, etc.; he answered, *alcohol.*

The other remedies were at once withdrawn and whisky substituted, which was given in frequent and small doses. This treatment soon began to show its beneficial effects, and with the assistance of arsenic the blood became normal, recovery following in a short time.

In order to test the microscope, Dr. K. with Drs. Campbell and Markoe, after carefully examining a number of cases, got Dr. Formad to examine the blood of each without reference to their condition of which he knew nothing, and in only one were micrococci present, that being a case with all the malignant symptoms.

Vegetable acids the doctor says also have the effect of checking the development of micrococci in culture solution, especially acetic acid; but the mineral acids, also carbolic acid, it is said, has no such action. Bi-chloride of mercury also possesses this quality to a very marked degree.

Rötheln.—Dr. Reed[1] reports the following facts observed during the progress of a number of cases at Atlantic City, of Rötheln or German measles:

The almost uniform enlargement of the chain of cervical lymph-glands. The apyrexial character of the disease: the temperature rarely rose higher than 100 or 101°, and always falling to the normal on the second day.

There was little if any constitutional disturbance; some of the children were allowed to run about the streets, covered with a formidable-looking eruption, without a suspicion of their suffering from anything but a tooth-rash.

In some of the cases there was desquamation, and in one instance slight albuminuria and dropsy following the attack. Three cases occurred in one family in a modified form. One a boy of five years presented a decided dermatitis, involving both cheeks, and in a less degree the sides and front of the neck; the skin was fiery red, very finely punctated and hot to the touch, and the lower eyelids were œdematous; temperature of rest of body and pulse normal. Another a girl of three years, had diffuse punctated rose-colored rash, covering the whole thorax and extending slightly to the abdomen, the rest of the surface being entirely free; at the same time there were two patches of genuine dermatitis, three inches in circumference, upon the breast.

The eruption did not disappear in either of these cases until the fourth or fifth day, a somewhat longer duration than usual. The third, a child, had slight erythema of the fauces and a fine punctated rash on the tonsils and velum palati, but no rash on the skin.

Dr. Maclean[1] says he treats measles very successfully with the following mixture, which should be given every three hours: Ipecacuanha wine, half drachm; syrup of squills, half an ounce; quinia, two grains; acetate of ammonia, liquor, two ounces. Dose for a child two or three years, a teaspoonful in water. The quinia to be increased according to age.

We have thus in this mixture a stimulating expectorant and diaphoretic to relieve the skin, and also in the quinia a specific to destroy or abate the violence of the primary ferment. When cough is very irritating, tinct. of hyoscyamus may be added.

As the quinia is essential for the destruction of the ferment, when the stomach is irritable it may be omitted from the mixture and given in powder mixed with saccharated carbonate of iron, which diminishes the irritating action of the drug when taken alone.

This form of treatment for measles is good in all types of the disease, whether the attack be mild or severe, but more especially valuable when we have that dangerous form in which the eruption is of a deep purplish color, a form which is generally recognized as being the most fatal.

VARIOLA AND VACCINIA.

Dr. Stewart[2] refers to a case reported by Dr. Richard S. Stewart, in which a child was born with pustules over its body, and died on the fourth or fifth day of smallpox, mother having been attacked two weeks before parturition with this disease.

Dr. Roger McNiel[3] says that so far statistics go to show that under ten years the initial rash is extremely rare, and that comparatively few vaccinated children under that age are affected with smallpox.

Dr. I. E. Atkinson[4] saw a woman, under care of another physician, who, immediately preceding her confinement, was living in a room with a case of confluent smallpox. She was successfully vaccinated, and six days and nineteen hours after gave birth to an apparently healthy child.

Three days after her labor her child was attacked with the disease, but of the discrete variety, and recovered without secondary fever or subsequent pitting.

He thought the results of this case indicated a protection.

In April, 1881, Dr. Leonhard Voigt,[5] the superin-

[1] *Phil. Med. Times*, November 17, 1883.
Archives of Pediatrics, January, 1884.

[1] *London Lancet*, October 13, 1883.
[2] *Maryland Medical Journal*, May 1, 1882.
[3] *Edinburgh Medical Journal*, November, 1883.
[4] *Maryland Medical Journal*, March 1, 1883.
[5] *British Medical Journal*, December 22, 1883.

tendent of the Vaccine Institute at Hamburg, experimentally solved the vexed question of the origin and nature of cowpox, and in his most recently published report sums up the results of his observation under nine heads, which may be looked on as an epitome of the whole question:

1. It is possible to create vaccine by the inoculation of the calf with lymph from the pustules of human beings, the subjects of smallpox; but success must not be expected in every case.

2. The energy of variola-vaccine obtained in this way is such, that it is not fit for the purpose of vaccinating human beings until it has been several times transmitted from calf to calf, or from ox to ox, and its intensity has been thus diminished.

3. In the first year, this new lymph has a greater protective power than animal lymph of older stocks.

4. Vaccinia and variola are derived originally from the same contagion, and give to those affected by them an immunity one against the other.

5. The duration of this immunity depends on the intensity of the pathological process.

6. After the lapse of twelve years, persons who have been attacked with smallpox show the same susceptibility to vaccination as those who have been vaccinated at an equally remote period; consequently, children of 12 years of age, vaccinated in infancy, present a moderately favorable soil for the poison of smallpox.

7. Therefore, re-vaccination of all children at or even after the age of 12, is highly to be recommended.

8. Animal lymph, originally very active, diminishes in efficacy when transmitted from calf to calf, sooner than humanized lymph transmitted from arm to arm. On the whole, *i. e.*, after a long time humanized lymph gives better results both in man and beast; whence it follows that animal lymph from old stocks gives less success than retro-vaccine of the first generation.

9. Carefully generated, and in well ventilated and regulated stalls, variola-vaccine is the most energetic of all, not only when taken direct from the calf, but especially in its humanized form. Consequently, if we would obtain the most powerfully protective lymph, we should, when occasion offers, from time to time reproduce a stock of variola-vaccine.

Dr. Page on treatment says: I have been so much pleased with the apparently abortive action of actea racemosa on variola, in the case of a negro man who had "just moved to Baltimore," and on four of his children, all of whom had the disease coming out in rich profusion—that I made a note of the fact.

Under the use of this drug the cases progressed to the papular stage, and in the case of the father pustulation took place only on the face; but in the cases of the children, the secondary fever and pustulation did not take place. The actea racemosa was administered in the form of the tincture with simple elixir. I have had no opportunity to try the medicine except in that one family.

Rosenthal,[1] acting on an article by Boyer, has employed salicylic acid in many cases with good results.

His formula is the following:

℞. Acidi salicyli.....3i.
Spts. vini rectificati.....3ss.
Misc. et adde elix. simplices ad..3vi.

For the angina of variola, he uses in conjunction with this the following gargle:

℞. Xylol.....3i.
Gum acacia.....3ii.
Aquæ menth. pip.....3vi.
M.ft.—Emulsio.
Sig.—Use as a gargle and mouth-wash.

He confirms the statement that salicylic acid in smallpox reduces the temperature, is sedative, and modifies the eruption.

[1] *Med. Bulletin and Virg. Med. Monthly*, November, 1881.

MUMPS.

MM. Cabitun & Charrin,[1] at a recent meeting of the Biological Society of Paris, gave an account of the investigations in which they have for some time been engaged, on the presence of minute organisms in the blood of persons suffering from mumps. These are multipliable by cultivation in Liebig's broth, and are found to consist of minute *batonnets*, but chiefly of micrococci all in a state of motion. These minute organisms, they consider, corroborate the clinical observations which tend to place mumps among the infectious diseases.

The absolute proof that this disease is due to these minute bodies by reproducing it by inoculation of the cultivated forms, has not been attained by the experiments made to that end.

William H. Walter, M.R.C.S., B.M.J., Dec. 22, 1883, reports the following case in a boy of 14 years:

He had been ailing for a week with "a bad cold and sore throat," it was stated. He was found unconscious with contracted pupils, tem. 105, 5° F., rapid feeble pulse. The history given pointed to mumps, though the parotid glands were not swollen.

A day or two before a sister had been seen with a pain and soreness about the jaws, and a little later, a case of undoubted mumps occurred in the same family.

These circumstances sufficiently establish the fact that the primary affection in the case was mumps. The high temperature lasted two or three days, but the cerebral symptoms of delirium, coma, etc., for nearly a week. He made a slow recovery. Attention is called to the fact of the great frequency of meningitis as a metastasis and to the combination of this with orchitis. This combination, the writer believes, has not been recorded.

[1] *Gaz. Med.*, Dec 17, and *Med. Times*, Dec. 31, 1881, and *London Practitioner*, vol. 29, 1882.

INFANTILE DIARRHŒA.

Ballard[2] on the Etiology and Pathology of Summer Diarrhœa in Children, says that while the subject-matter of his paper is far from complete, some of the conclusions come to are as follows: The disease cannot be considered a simple diarrhœa, but rather an affection of the system at large, which can in less than twenty hours produce lesions of considerable greatness. Autopsies have unfortunately been

[2] *British Med. Journal*, Aug. 25, 1883.

too seldom performed; notwithstanding this, they show the pathology of summer diarrhœa to be somewhat analogous to that of cholera. This disease is not the result of a relative lack of attention, which happens to children in the great manufacturing centres: for example, while three centres, Leicester, Nottingham and Preston, head the list of infant mortality from summer diarrhœa, three other centres not less important, Oldham, Rochdale and Halifax, occupy the foot of the same list.

Another cause of diarrhœa which is very much dwelt upon by some men, is the use of feeding-bottles; but the author says he is satisfied they have nothing to do with it, at least not leading causes. Artificial alimentation is also a decided factor in the mortality of this disease, for, of 341 children dying from the cause in question, only 2 per cent. were fed with breast-milk. Cow's milk, which formed the nourishment of 60 per cent. of them, is far from being a faultless means of nourishment. The influence of elevated temperature is undeniably efficient in producing this disease, and that influence remains even after the months of autumn.

Speaking in general terms, it may be said that in great cities the maximum of heat in July will have a direct bearing upon the maximum of mortality from infantile diarrhœa. The fetid exhalations of sewers have been accused by certain hygienists as the cause of this trouble, and admitting that there may be some room for such a charge, it is to be observed that Nottingham, which possesses no sewers, has a high death-rate from infantile diarrhœa.

Excrementitious odors are also potent causes, but not the most influential, as proven, at least at Nottingham, for there the matters are removed twice a week, and these odors are unknown, and, nevertheless, it has a high death-rate. On the other hand, Helston, which, from this cause, is one of the most infectious localities in the United Kingdom, suffers very little from infantile diarrhœa.

We are, therefore, led to infer from all this, that further information is required in the light of well-reported cases, and post-mortem examinations carefully made, before the true etiology of this disease can be reached.

Morison[1] has published a paper on Infantile Diarrhœa and its Treatment, and in it refers especially to two forms, milk diarrhœa and teething diarrhœa. For the former he considered mild cholagogue remedies the best, and gives with the view of gently effecting biliary secretions, one or other of the following: euonymin, podophyllin, phosphate of soda, or ipecacuanha, these having been found, according to Rutherford's[2] experiment, the best. A small quantity of an alkali may be sometimes added to each dose.

The quantity used is just sufficient to secure the digestive, without the purgative action of bile.

For the latter form of infantile diarrhœa, besides the gum lancet, nervine tonics and sedatives are advised, arsenic, oxide of zinc, bromide of potassium, or ammonium and camphorated tincture of opium, especially the two latter, and usually with evident benefit.

Dr. Christopher Elliott[1] recommends the infusion of chamomile flowers as highly beneficial in infantile diarrhœa, especially when proceeding from dentition, and when the stools are greenish in color, or are slimy and streaked with blood, it will quickly calm a fretful child. The dose of the infusion is ʒss to ʒi for a child under one year; for a child over that age double, three times a day or oftener, according to the severity of the attack.

The *rationalé* of the treatment is the power which chamomile flowers possess of subduing reflex excitability, this power belonging to the volatile oil they contain.

Dr. Lewin[2] gives, with great success to very young infants, the soluble albuminate of tannin, made by adding white of egg to a solution of tannin; the white of egg must be previously beaten up with some water.

ERYSIPELAS.

Dr. Lawrence[3] draws our attention to the importance of bearing in mind the frequency of infantile erysipelas. It may originate from either puerperal fever or some epidemic influences prevailing at the time of birth. Again, erysipelas may occur as an idiopathic expression of a blood infection. More frequently, however, it has a traumatic origin, the starting-point being the umbilicus, but any abraded cutaneous surface renders the disease possible, as eczema, intertrigo, impetigo, cicatrizing vaccine pustules, etc.

As illustration, a case is cited of an infant, in whom vaccine scabs were separated some days after vaccination, who was handled by an aunt, just from the country, who was recovering from erysipelas. The next day the infant was restless and refused food, and on the following day erysipelas began at seat of cicatrices, spreading rapidly along the arm.

Dr. L., besides advising the usual treatment, lays great stress upon the importance of paying strict attention to bodily cleanliness, and to the hygiene of both the lying-in room and nursery.

W. A. Macleod[4] reports a case to substantiate the infectious nature of erysipelas. Whilst visiting a Mrs. F. during her puerperium he was asked to see her child who had been taken ill on the previous day. He diagnosed the case as erysipelas. Shortly after he saw a woman who had been visiting the child, and frequently played with it, and he found that she had taken the disease.

WHOOPINGCOUGH.

It has been rightly said that until lately the profession has bestowed but little, if any, serious scientific attention on some of the commonest maladies to which flesh is still heir, and whoopingcough seems to be most conspicuously of that number.

Prof. Rossbach,[5] after studying the conditions presented by the larynx and the air-tubes in all stages of

[1] *British Med. Journal*, August 25, 188 .
[2] *Brit. Med. Jour*, Vol. I, 1879.

[1] *London Practitioner* of Dec., 1882.
[2] *Centralblatt fur die Medicinischen Wissenschaften*, Jahrgang 1883.
[3] *Brit. Med. Jour.*, Dec. 1, 1883.
[4] *Brit. Med. Jour.*, Nov. 3. 1883.
[5] *Berlin Klin Wochenschrift*, Nov. 18, 1880.

the disease in four children, respectively six months, four, seven and ten years, and in a woman, says that in regard to the essential nature of pertussis, bronchial catarrh must not be regarded as a mere complication, but as immediately connected with the very existence of whoopingcough. The disease has its seat especially in the large bronchi. The violent attacks of coughing, however, cannot be attributed exclusively to bronchial catarrh, nor to masses of mucus reaching an irritable region of the trachea, since bronchial catarrh under similar circumstances may occur without inducing coughing of equal intensity or duration.

He further says that the attacks of coughing are not alone produced by the mucus, but also by the irritation of the violent draughts of air accompanying forced respiration. One of the essential etiological conditions is the existence of a reflex neurosis, and he thinks it probable that in whoopingcough the coughing centre in the medulla oblongata is in a state of abnormal excitability owing to the presence of some specific virus, so that a slight peripheral stimulus conducted through the centripetal fibres of the superior laryngeal nerve is sufficient to excite coughing.

The results of treatment, he considers, support these views. After finding that change of air produced no effect, he endeavored to restore the nervous apparatus to the normal stability in the younger children by transmitting a strong, constant current through the spinal cord, and obtained favorable results; at the same time he administered to the older children quinine in large doses, the latter producing its effect by lowering the excitability of the medulla, and not, as Letzerich believes, by its local lethal action on a supposed fungus, since it was given in the form of capsules.

M. Gueneau de Mussy[1] has constantly found enlargement of the mediastinal glands and compression of the recurrent laryngeal nerves in children that have died of whoopingcough. He regards the compression of the nerves and consequent irritation as the cause of cough, and considers whoopingcough to be an eruptive fever in which the eruption is internal.

Its stages are local lesion of the pulmonary mucous membrane, enlargement of the peribronchial glands, compression of the recurrent nerves and cough.

Dr. Burger[2] not only believes in the germ theory, but thinks he has discovered in the sputa in cases of whoopingcough certain organisms which he holds to be specific and the cause of the disease. These organisms he describes as small, rod-shaped structures.

Toeplitz,[3] of Breslau, mentions whoopingcough as being treated successfully by means of various kinds of powder which were blown into the larynx by means of an insufflator or gum-elastic balloon. Salicylate of soda was principally used.

Robert Lee,[4] applying the general principles of antiseptic treatment for the cure of this affection, used carbolic acid, combined with turpentine, benzine, or one of the fragrant oils; he also tried sulphur in frequent and small doses, and has obtained from them sufficient good results to warrant a suggestion that trial should be made of other volatile agents, such as creosote, oil of amber, etc., he also adds that the common plan of stirring some tar with a hot poker in the room where cases of whoopingcough are is certainly attended with benefit, and is largely used in hospital practice by him.

Prof. O. Heubner[1] has tested the comparative action of five of the most common remedies in this disease, viz.: bromide potassium, quinine, hydrate chloral, salicylic acid, and belladonna. The bromide was given in doses 7 to 45 grs. per diem in aquæous solution, in twenty-three cases; salicylic acid in a 1/3 to 1/2 per cent. solution, as inhalations with Siegle's spray-producer, about an ounce being used at a time, in seventeen cases, and belladonna in doses of 1/4 to 1 grain per diem, in eight cases. In none of the twenty-three cases in which the bromide was given, was the duration of the disease lessened. Chloral was given in divided doses, in two, and an enema, in eight cases. In two, the duration of the disease was lessened, and the intensity and length of the paroxysms, in six cases. Salicylic acid was given by inhalation in sixteen, and as salicylate of soda internally, in one case.

In two, the duration of the disease, and in ten, the length and severity of the paroxysms were lessened. Belladonna was given in eight cases. In three, the duration of the disease, and in one case the intensity of the paroxysms were lessened.

Thus salicylic acid and chloral tend to relieve the paroxysm; belladonna and quinine to shorten the disease.

Dr. John Dewar[2] calls attention to ergot as being the safest and best remedy.

This conclusion he came to after extensive trial of a vast number of useful drugs, viz.: Bromide potass., belladonna, and zinc.

He says ergot seldom fails to cure whoopingcough in from one to three weeks, the cases longer in getting better being those complicated with bronchitis, or with troublesome bronchial catarrh.

The dose used was 4 to 15 minims of the fluid extract every three or four hours, to a child of 3 months and upward.

In reference to how ergot acts in whoopingcough, he says: "I regard the spasmodic cough as due to reflex action, and that in its turn brought about by the peculiar condition of the blood irritating the peripheral ends of the sensory nerves. Ergot dulls or paralyzes these nerves, and so lessens and eventually prevents the spasms."

Although he considers the true pathology of whoopingcough yet to be doubtful, regards it as a germ disease, as only on that ground can its infectious nature be explained.

I have used ergot both in the form of ergotin and the fluid extract for various cough troubles, notably

[1] *London Practitioner*, Vol. 18, page 292.
[2] Berliner Klin. Wochensch., Jan. 1. 1883.
[3] Breslau, Aerztlich, Zeitschrift, 1880, No. 3.
[4] The *Lancet*, May 7, 1881.
[4] *London Practitioner*, Vol. 27, page 208.

[1] Jahrb. f. Kinderk, B. 16, Wien, Med. Zeitg. No. 39, 1881.
[1] *London Practitioner*, Vol 28, page 217.
[2] John Dewar, L. R. C. P., on Physiological and Therapeutical Action of Ergot, *London Practitioner*, Vol. 28, 1882.

whoopingcough, since 1881, when my attention was first called to it as a cough sedative by Dr. James Allen.[1]

The doctor claims that when used hypodermically it is a remedy having notable power in allaying coughs of various lung conditions, and in diminishing sputum. I have found it acted as well, if not better, when given internally.

Ergot seems to have been first prominently brought forward in the treatment of whoopingcough by Dr. Griefenkel,[2] who reported the case of a boy 6 years old whom he cured in eight days by the use of this drug. While being able to endorse Dr. Dewar's statements in regard to ergot in the treatment of whoopingcough, it must be borne in mind that there often arise stages of the disease in which other remedies must be used at the same time, viz.: If there is much febrile disturbance, aconite should be used, and is probably the best; in cases where subacute catarrhal bronchitis ensues, alum, owing to its astringent, bracing and tonic action on the blood, mucous membranes of the stomach and air passages, will be found, if given in small doses, very serviceable.

W. Squire[3] finds that an aqueous solution of ethyl bromide, strength 100 to 200, gives good results in whoopingcough. Half to 2 ounces should be used at a time.

Dr. Cullimore[4] offers the following prescription for whoopingcough, which, while containing nothing new, is worthy of notice:

℞. Aluminis sulph.....grii.
Tinct. belladonna.....m iii. to v.
Tinct. cinchoniæ.....m xii.
Syrupiaurantii.....ʒss.
Aquæ.....ʒii.

M. ft.—Suitable dose for a child of the age of 4 years.

M. Campardon[5] has employed carbonic acid in this disease.

The gas was formed in a seltzer water apparatus, which is conducted by rubber tubing to the nostrils, where it was slowly delivered.

Cure in one was complete and rapid. In using the carbonic acid, it is necessary that the gas be charged with vapor of water.

[1] *British Med. Journal*, Jan. 29, 1881.
[2] *Edinburgh Med. Journal*, 1863.
[3] *London Lancet*, 1883.
[4] *British Med. Journal*, Feb. 2, 1884.
[5] *Jour. de Med. de Paris, Canadian Practitioner*, March 1, 1884.

MILK TREATMENT OF DISEASE.

BY JAMES TYSON, M.D., PHILADELPHIA, PA.

(Read before the Section on Practice of Medicine and Materia Medica of the American Medical Association, May, 1884.)

In the course of a somewhat extended experience with what is known as the "milk cure," it has occurred to me that the growing popularity of this form of treatment, demanded, at this time, some systematic consideration of the principles and practice on which its use is justified, as well as an outline of the class of cases in which it may be expected to be of advantage.

It is now a little more than eighteen years[1] since Dr. Philip Karell read his paper on the "Milk Cure" before the Medical Society of St. Petersburgh.

To this paper I must refer for a large number of interesting historical facts, of both ancient and modern date, bearing on this subject, beginning with Hippocrates and coming down to the date of the paper itself. Among the diseases for which it had been recommended during this period, were phthisis, gouty affections, particularly articular, sciatica, leucorrhœa, hectic fever, dropsy, typhoid fever, intestinal obstruction, Bright's disease, intermittent fever, obesity.

Karell himself numbers the cases of successful treatment with milk "by hundreds." Dr. Inozemtseff, the author of a work on the "Milk Cure," published in Moscow in 1857, treated, with the help of his assistants, 1,000 cases. The former further says, "With regard to my own practice I have, after fruitlessly trying all sorts of remedies in many chronic and obstinate diseases, at last succeeded in bringing the elementary canal, that seat of so many diseases, under my control. I did this by administering milk according to a new method." He says also, "After a great deal of experience, I have arrived at the conclusion, that in all dropsies, in asthma, when the result of emphysema and pulmonary catarrh; in obstinate neuralgia, when its cause lies in the intestinal canal; in diseases of the liver (simple hypertrophy and fatty degeneration), and generally in diseases when there is faulty nutrition, often a consequence of obscure sub-acute inflammation of the stomach or intestines, followed by affections of the nervous centers—in all these cases I consider milk as the best and surest of remedies. Even in those cases where the dropsy is the result of organic heart disease, or of old standing liver complaint, or of far advanced Bright's disease, I have seen very marked improvement take place, which also lasted a considerable time."

I have thus freely quoted Karell, because I believe the date of his paper marks an era in the history of the milk cure. He was instrumental in directing the attention of many to this method of treatment, and among them Prof. Niemeyer, who writes to him in 1861; "I thank you sincerely for having recommended the milk cure to me. I often resort to it and can praise it highly. If one were to acknowledge the existence of a number of diseases, the cause of which is not to be sought for in the remediable affections of certain organs, but rather in a perverse nutrition of which we are unable to define either the extent or nature, we must then admit the curative virtues of milk, and regard as a true advance in science, the discovery that this aliment is an innocent, and at the same time efficacious remedy, for producing a complete change of nutrition."

Referring to the extraordinary success claimed by some, Karell says he has no faith in so large a num-

[1] On the Milk Cure, by Philip Karell, M.D., Physician to His Majesty, the Emperor of Russia. Translated from the author's manuscript, by G. L. Carrick, M.D., Physician to the British Embassy at St. Petersburgh. *Edinburgh Medical Journal*, Vol. xii, Pt. I, p. 96, Aug., 1866.

ber of fortunate cases. He does not attempt to decide whether the beneficial influence of milk in certain illnesses is due merely to its nutritive qualities or some occult medicinal virtue. He simply calls attention to the fact that milk and chyle resemble each other very closely, insists that it must be taken at regular intervals under the direction of an experienced person, in doses from two to six ounces of *skimmed* milk, and that the best results are only obtained when the diet is an exclusive one. He further characterizes it as a regulator of nutrition.

My own experience with the milk treatment includes the following classes of cases: diabetes, calculous disease, Bright's disease, dyspepsia, obesity, and certain instances of the so-called nervous prostration in women, in which its use formed a part of the treatment by rest, seclusion, massage, and electricity, and which has produced such satisfactory and widely known results in the hands of Dr. S. Weir Mitchell, of Philadelphia.

First, as to *diabetes mellitus*, it is now generally conceded that no measures are so efficient in removing the sugar from the urine, and relieving other symptoms, as the dietetic, and of the dietetic treatment none has been so promptly efficient in my hands as an exclusive milk diet. As to the degree in which relief is afforded, it must be admitted that a cure cannot always be guaranteed. The possibility of this depends upon the lesion at the bottom of the disease. But I add my testimony to that of Donkin and others to the effect that a certain number of cases are completely relieved, and that the symptoms do not return, after a cautious addition to the milk diet, and gradual substitution by nitrogenous, and, still later, even by starchy and saccharine foods. Other cases, again, show no sugar in the urine as long as the milk diet is continued, although this and other symptoms recur immediately that it is omitted and other food is substituted. In a third class of cases, sugar is much diminished, but does not disappear, and in such instances I have invariably found, in the most carefully conducted comparative experiments, that no other treatment is as efficient in diminishing the glycosuria. In a last, and smallest number of cases, the milk diet is really badly born, and it is impossible to carry it out; but in the large majority it is the most efficient remedy of which I know.

My method of exhibiting milk in diabetes, and indeed in all the conditions, to which I will refer as adapted to it, is to begin with half a tumbler-full, or four ounces of skimmed milk every two hours, for the first day, from which it is evident only thirty-two ounces, or a quart, can be given from 7 A. M. to 9 P. M. This is, of course, insufficient for an adult person, and even the second day I increase to six ounces every two hours, and after a day or two more to eight ounces, in which way sixty-four ounces, or two quarts are reached in the period named. This amount is quite sufficient for many persons of both sexes with small frames and light weight, but is quite insufficient for others, for whom the quantity may be increased by taking more at one time, or beginning a little earlier in the day and continuing later; or a glass or two may be taken during the night. Or, the interval may be increased to three hours, when still larger quantities must be taken at a time, until an amount sufficient to appease hunger or to maintain a good weight is reached. I have known twelve and a half pints to be taken per day by a large man whose average weight was 195 lbs., but it is very seldom that so much is needed, and its ingestion becomes very inconvenient. When, however, such quantities are necessary, a part may be taken in the shape of curd, as suggested by Donkin. Thus, the man just referred to, took the curd from four and a half to six pints, and drank the remainder of twelve and a half pints per day, he having found this much necessary in order to retain his weight while exercising actively during the day. While using eight to ten pints a day, part in milk and part in curd, he lost a half to three-fourths of a pound daily, although his health and strength continued perfect.

It is impossible to lay down a rule as to the quantity required in the twenty-four hours, but it may be roughly put at from five to ten pints for persons of medium stature, the larger quantity being necessary for those who are exercising, and the smaller for persons at rest.

The milk should be taken slowly, and not gulped in large amounts at a time. Not less than five minutes should be occupied in the drinking of a single glass of eight ounces. Nor should it be taken very cold. In summer the temperature should be about 60°, or a little below that of the surrounding atmosphere, and in winter it may be raised to the same temperature, or even slightly warmed, but it should not be boiled, unless diarrhœa is present.

Such a diet is of course quite compatible with health and strength for an indefinite time. And while I hardly advise that no attention be paid to the complaints of those who say that milk does not agree with them, I always insist on being allowed to settle that question myself by actual trial; and it is well known that where unskimmed milk is not well born, producing, as it sometimes does, discomfort from flatulence or other cause, the skim-milk may be taken without causing any such sensations. Should the latter still disagree, which is very rarely the case, the liberal addition of lime water in the beginning, say but an amount equal to one-fourth, or even one-half the milk used, will often correct the difficulty; and later the milk can be gradually resumed in full strength. Occasionally, too, persons will complain of feeling weak upon a milk diet. This complaint, which is also often unfounded, may be met by increasing the amount prescribed.

A complaint of greater importance is the constipating tendency of a milk regimen, particularly at first. But this may be corrected by the daily use, if necessary, of one of the saline aperients, of which sulphate of magnesium is one of the best, or one of the aperient mineral waters, as Hunjadi Janos, or Friedrichshalle, or some one of the Saratoga aperient waters; or if these are insufficient, a pill of compound extract of colocynth, podophyllin and extract of hyoscyamus may be used; or a cup of black coffee in the morning may be sufficient. In many cases this symptom disappears after a time, and the

whitish, almost odorless evacuations continue daily.

In diabetes mellitus, more than in any other conditions to which the milk treatment is applicable, it should be exclusive, at least at first. My plan is to continue the milk until sugar has been absent for from four to six weeks, after which I gradually add other foods, beginning with unskimmed milk, meats, oysters, fish, tomatoes, the green vegetables, gluten, bread, fruits. The urine is tested after each addition of food, and if glycosuria is found, the article of food responsible for it is omitted for a time longer.

If I am asked the rationale of the action of skim-milk in the treatment of diabetes, I am compelled to admit that I have no reason to believe it is directly curative. The most that can be said of it is that by furnishing a food which is nonirritating and easily assimilable, even as to its saccharine constituent lactose, we give a rest to the starch and sugar assimilating apparatus, and allow the reparative tendency of nature to assert itself, and the hepatic or intestinal condition which causes the glycosuria, to disappear.

This is no time to discuss the pathology of diabetes, but there can be no doubt but that a certain number of cases consist in a simple organic or functional derangement of organs which only require to be let alone in order to restore themselves to a normal state, while the irritation caused by foods which can only be assimilated through their offices, must result in more or less permanent lesions. There are few who have not realized in some degree the suffering incident to the use of an inflamed muscle which prompts us to place it in a state of rest. The liver can make no appeal of this kind against its abuse; and whether the condition as the result of which it cannot make the normal disposition of the glucose be primary to it, or secondary to a primary lesion elsewhere, the continued use of such foods can only aggravate both primary and secondary lesions.

Now, the skim-milk furnishes a food of a kind which gives the liver a thorough rest—and a more complete rest than any other diet as yet suggested. This, I am forced to admit, is the only way in which I conceive it acts in the cure of diabetes. Hence it is that there are certain cases due to lesions remote from the liver, which are themselves incurable, either spontaneously or through direct treatment, which milk cannot reach; such, I believe, are some forms of pancreatic disease. In these cases, the lives of the patients are prolonged by any diet which furnishes the requisite reparative and force-producing elements in an available shape. In such case, a starchy and saccharine food is wasted, simply because the resulting grape sugar passes directly through the system. Milk and the albuminous foods, not being converted to any extent into grape sugar, are still available as force producers, and thus defer the unfavorable termination, or, in a word, keep the diabetic from starving.

It may also reasonably be asked, why is skim-milk superior to unskimmed? I believe any superiority consists in the fact that milk deprived of its cream is simply more easily assimilable than unskimmed milk, and therefore less likely to disturb digestion. There are probably none here who have not heard the complaint from certain patients that a milk diet makes them bilious, by which is merely meant that it causes indigestion. And there are doubtless many who have found the substitution of skimmed milk to remove these symptoms. I have, too, quite frequently observed that whatever food produces indigestion in a diabetic is apt to cause an increase in the glycosuria, independent of its composition, and I have sometimes thought that the use of the curd I have alluded to causes a slight return of glycosuria from this cause.

On the other hand, as already stated, I am quite in the habit of gradually adding unskimmed milk to the skimmed in cases of diabetes, and where there occur no symptoms of indigestion, I have continued it before adding other articles of food. In like manner, peptonised skimmed milk in which the casein is partly digested, is even more easily assimilated than the non-peptonised.

A second class of cases, in which the skim-milk has been of signal usefulness in my experience, and in which its results are capable of a more rational explanation than in diabetes, are cases of *uric acid gravel*. I have yet to see an instance of persistent uric acid sediment, in which the exclusive use of milk was not followed, sooner or later, by a total disappearance of the deposit, while I have known its persistent use to be followed by the easy discharge of uric acid calculi of considerable size, *per urethram*.

The rationale of these results has been made perfectly plain by the chemical study of the urine of persons on such a diet, by Dr. John Marshall, of the University of Pennsylvania, undertaken at the suggestion of Dr. Mitchell, a year ago, and repeated recently for me. It is rather singular that although skim-milk has been used for so many years in diseases involving a study of the urine, examinations of this kind were not previously made. The most important result of these analyses, is the fact that in the total twenty-four hours' urine of persons on the skim-milk, *no appreciable amount of uric acid could be found*.

Here, too, as might have been expected, the same results obtained, whether the patient used a diet of skimmed or unskimmed milk. Dr. Marshall examined for me for three days in succession, the urine of Mr. M., who had been for several weeks upon a diet of unskimmed milk. The quantity of milk ingested during these three days, was on the first day six pints, or 2,838 c.c.; on the second day the same, and on the third day five pints, or 2,365 c.c. The quantity of urine passed, was on the first day 1,356 c.c.; on the second day 1,580 c.c., and on the third day 1,070 c.c. The total urea in the first was 31.59 grams, in the second 27.96, and in the third 19.68. *Uric acid was not present in recognizable quantities—i. e.* 500 c.c. of each sample evaporated to dryness and properly extracted, gave no reaction with the murexid test. Dr. Marshall says further: "Uric acid probably might be found if five or six liters of the urine in question were evaporated to dryness and tested, most likely, however, only a trace."

Here, then, we have a simple rational treatment

for uric acid gravel, and as successful as it is simple. There seems, too, to be no reason why the milk should be skimmed for this use, rather than unskimmed, while the latter has the advantage that a smaller amount is needed to satisfy hunger and keep up the weight of the body.

As to the propriety of an exclusive milk diet in these cases of uric acid gravel, it may be determined by experience. While it may not be necessary in every case, in some it is absolutely so. In the case of Mr. M., who had several severe attacks of nephritic colic, and who, under ordinary mixed diet, as constantly passes a large daily amount of uric acid, as he is constantly in discomfort, the addition of bread only, to a meal, causes a return of uric acid, while a pure milk diet is unattended by such discharge.

While an exclusive milk diet is so efficient in cases of pure uric acid gravel, it is not to be especially recommended in *phosphatic calculus*. Indeed, it is rather contra-indicated. For the effect of a milk diet is to alkalise the urine, and therefore to tend to maintain a phosphatic sediment.

While nothing can be hoped for in respect to solvent action, or tendency to solvent action upon *oxalate of lime* sediments, by urine derived from a milk diet, yet, as it is commonly supposed that the same conditions of system which tend to produce uric acid are those which produce oxalate of lime, it may be expected that milk treatment will also be useful in the oxalate of lime tendency.

The third set of diseases in which I have found the milk treatment especially useful, are certain forms of *Bright's disease*. In these, more discrimination has to be exercised than in any of the foregoing. In general, it may be said that it is in the contracted kidney of interstitial nephritis that milk is most useful, the headache, nausea, vertigo, and "fulness" in the head, and the palpitations which are so often very annoying symptoms, are frequently relieved by it. Here, too, the skimmed milk is especially indicated, because anything which increases the labor of digestion aggravates the symptoms above mentioned as characteristic. It would seem, too, that those suffering with contracted kidney are better when the blood is not too good in quality or too rich in solids. On the other hand, it is not so necessary that the diet should be exclusively milk, and a sufficient quantity of bread and vegetables may be permitted to break up the monotony, while meat, eggs, and all foods rich in albumen should, as a rule, be prohibited. In this disease, especially, the constipation incident to a milk diet should be guarded against.

In parenchymatous nephritis and amyloid kidney I have found milk less useful, while it is still a very convenient and suitable diet, often producing diuresis and relieving dropsies. When a diuretic effect is desired, buttermilk is to be preferred, while it is as easily assimilated as skim-milk, and often more palatable.

That a milk diet should be useful in certain cases of *gastro-intestinal disease*, is generally recognized. There are two classes of cases for which it is adapted. The first is that represented by the ordinary dyspeptic, whose symptoms are sometimes dispelled as by magic by a pure skim-milk diet systematically carried out, and modified by the free addition of lime water. In a few instances of ordinary dyspepsia I have found the use of milk to produce flatulence, and to be altogether ill borne, but this tendency is corrected by peptonising the milk.

At the same time, I cannot too strongly recommend in all cases of simple dyspepsia where other measures have failed, a trial of the milk treatment in the systematic manner described, and modified as the peculiarities of the special case may demand, and especially in the event of failure with simple skim milk that the peptonised milk be tried.

But it is more particularly in the treatment of organic diseases of the gastro-intestinal tract that the bland and unirritating qualities of milk diet are indicated. In gastric ulcer the use of no other food than peptonised milk should be permitted. In chronic enteric disease of both small and large intestines, and particularly of the latter, it is very doubtful whether it is in our power, by therapeutic means, to directly affect the diseased parts. Our treatment must therefore consist in such measures as will favor nature's inherent tendencies to restore lost tissue. This can only be done by placing the patient on a diet which is nonirritating, leaves little waste, and at the same time makes the smallest demand upon the digestive function. To accomplish this, it is necessary to obtain his consent to the use of a diet of peptonised milk for an indefinite period. For no promises can be made as to the date at which other food dare be permitted. The uninterrupted presence of natural stools, and the continued absence of pain, are the only reliable criteria. To be able to carry out such a treatment satisfactorily, it is absolutely essential to secure the confidence of the patient. The process of obtaining this depends largely upon the personal qualities of the physician, and the ability to be able to speak authoritatively, but when the probability of almost certain recovery is held out, and it is shown that the good effect of weeks of treatment are undone by so simple a solid as a small piece of bread, the battle is half won. Particularly in those cases of irritation of the large bowel, attended by the discharge of mucus or mucus-casts, may we expect from the milk treatment the most satisfactory results, while success by local treatment is very rarely attained. The use of milk is rational, and consistent with what we know of the essential conditions of growth and repair.

I will allude to but one more use of the milk treatment, referring to Dr. Mitchell's little book on "Fat and Blood" for a better exposition than I can give of its use in the class of cases in the treatment of which he has earned so much reputation. The purpose to which I will refer is that for the removal of excessive *obesity*, and for this a skimmed milk is necessary. No treatment which has ever been suggested, is half so efficient. I have seen a lady disposed to obesity, who, in consequence of a more than usually quiet summer, and the liberal use of food, return to the city so much increased in flesh that she could not put on the clothing which a few months before was worn with ease, and suffering with a shortness of

breath which made walking any distance almost impossible, resume in the course of two weeks' use of skim-milk, to her usual weight and state of comfort. In these cases a pint of milk may be taken every four hours, or fifty-six ounces in the day, with directions to take more if hunger is not appeased. It is scarcely likely that even with this freedom too much can be taken to prevent the desired reduction in weight. It will be remembered that I referred to the case of a large man who was able to retain his weight upon twelve and a half pints a day, but when consuming ten pints daily, lost half a pound each day.

It may not be proper in all instances to reduce the weight so rapidly as can be done upon a skim-milk diet, especially when the subject is active or hard working, but it is to be remembered that obese persons are not usually of this kind, and that activity is facilitated by some loss of flesh. It is to be remembered, too, that the fat they carry is simply stored up in the subcutaneous tissue, because it is more than enough to supply the force-demands of the human machine, and has really had no use until the requisite daily amount of oxidizable material is not supplied in the daily food. Hence it is that when the weight is reduced approximately to a certain standard ratio to height, unskimmed milk or other articles of food should be judiciously added to furnish sufficient oxidizable material. But it is an interesting and important fact that when a certain stage of reduction is attained, further falling off, even with a moderate amount of milk, ceases, or takes place so slowly that it is easily made up by additions to the diet, to which of course there is no objection at this stage in the condition under discussion.

MEDICAL PROGRESS.

SURGERY.

THE TREATMENT OF GONORRHŒA BY OPEN WIRE BOUGIES.—D. C. M'Vail, M.B., in the *British Med. Journal*, gives a wood-cut showing three pieces of wire soldered together at one end with a flaring extremity at the other, of the size and shape of an urethral sound. The instrument is intended to keep separate the inflamed mucous membrane of the urethra during gonorrhœa, and also to allow the discharge to drain freely away, and not lie in the passage and give rise to renewed secretion. Another form has, instead of the flanged extremity, a short length of catheter-tube attached, and to that a short piece of rubber tube. The solution to be injected is introduced by a syringe, and when quite full, the India rubber tube is compressed by a spring clip, to prevent the escape of the fluid. Within from twenty to thirty minutes, the injection will be almost wholly absorbed by the urethral walls, and then the clip may be detached. These instruments are well borne in the urethra and the patient can pursue his ordinary avocations while wearing them.

PROF. LORETA'S NINTH OPERATION FOR FORCIBLE DILATATION OF THE ORIFICES OF THE STOMACH: RECOVERY.—On the 15th of March Professor Loreta forcibly dilated the cardiac orifice in the Surgical Clinique of Bologna. The patient, E. L., a young woman aged twenty, had for four years manifested all the symptoms, rational and direct, of ulcer of the stomach. For the last twelve months constriction had steadily increased; at first solids, and then liquids, entered the stomach with difficulty, so much so that only a few drops of broth could be swallowed at a time. Regurgitation of substances swallowed became the rule. The body wasted rapidly, and life could only be maintained with nutritive enemata. Having diagnosticated stenosis of the cardiac orifice, Professor Loreta proceeded to dilate it. He opened the abdomen in the linea alba, and found the stomach thick, small, and contracted. He incised it freely, and passed an elastic sound through the cardiac orifice to make way for his dilating instrument. This soon overcame the obstacle, in spite of efforts to vomit, and the œsophagus was found much dilated. The apertures in the stomach and in the abdominal wall were sutured separately. The operation was performed under chloroform in thirty minutes; and the patient, so soon as she had recovered from the narcosis, to the great surprise of the onlookers, swallowed three spoonfuls of water with perfect ease. Professor Loreta in a note to the *Lancet* states that the patient has entirely recovered.

RUPTURE OF THE URINARY BLADDER.—Dr. B. Beck, General and Corpsarzt of the 14th Army Corps of the German Army, has observed twenty-five cases of traumatic rupture of the bladder, and in the *Deutsche Zeit. f. Chirurgie*, he reports two cases at length, and adds the following conclusions (*Medical Press*):—

1. That simple rupture of the bladder may be caused by direct or indirect violence — falls on the feet or the lower end of the trunk — and that the momentary position and attitude of the body contributes in determining the situation, form, and extent of such rupture. The bladder will always give way at its weakest part, the anterior or posterior wall, the point being determined by the direction in which the contents of the bladder are pressed by the outside force.

2. The only characteristic symptons are those furnished by the wounded bladder itself, and these are: violent, frequently-returning attempts to urinate; inability to pass water spontaneously; flow of small quantity of bloody urine on passing the catheter; strong contraction of the bladder, whereby its capacity is diminished; free movability of the catheter, after which the small emptied space speedily fills up with some urine, which sets up renewed straining. If bloody urine escapes, the diagnosis may be made of extra peritoneal rupture, as it is only rupture of the anterior wall in the vicinity of blood-vessels that give rise to hæmorrhages. Oedema of the external genitals, caused by disturbance of circulation, supports the diagnosis of extra-peritoneal rupture.

3. The fatal termination in cases of simple rupture of the bladder is not a consequence of peritonitis, but of intoxication by resorption of decomposed urine.

4. Internal medicines are insufficient. The first requirement is the introduction of a permanent catheter, under strict antiseptic precautions.

As the urine that is poured out into the abdominal cavity is the greatest source of danger to the organism, the treatment in intra-peritoneal rupture should not be expectant. At the onset, or increase of local symptoms, if the general condition be gravely affected —and this will be seen in the course of a few hours— the following is the only mode of procedure calculated to save life: Laparations, removal of the urine poured into the abdominal cavity, thorough disinfection, and, finally, closure of the bladder-wound by suture. In extra-peritoneal rupture, when the urine has permeated the extra-peritoneal connective tissue, an expectant plan of the treatment is allowable so long as changes at the centre of infiltration do not point to the necessity for surgical interference. The main point in the treatment is the employment of a retaining catheter, with occasional cautious washing out of the bladder with some antiseptic fluid in order that no fluids capable of becoming disorganized may be allowed to remain, to the jeopardy of the patient.

MATERIA MEDICA AND THERAPEUTICS.

The Theory of the Mode of Action of Sulphur. —Unna (*Monatshefte für Praktische Dermatologie; Edin. Med. Jour.*) divides into two classes skin diseases benefited by sulphur. In the first — as acne, pityriasis capitis, and icthyosis, sulphur should be used in strong doses and persevered in. In the second — as eczema, sulphur should be used much weaker and only temporarily. If sulphur be applied to the sound skin, it soon produces an unnatural dryness, and finally, a weeping surface. In moist eczema, for a couple of days it dries and lessens inflammation. If injudiciously persevered in, it causes slight fresh outbursts of eczema. To account for this, Unna considers that sulphur in contact with the skin may originate various compounds, which may act differently on different tissues, and change in its action may be occasioned by its being brought in contact during its employment successively with deeper layers of tissue. The ordinary action of sulphur is comparable to that of very weak sulphuretted hydrogen. To study this, Unna prepared keratine by a complicated chemical process from fine horn shavings. This was soluble without difficulty in solution of sulphuretted hydrogen, and as the keratine dissolved the sulphurous odor disappeared. So that it is likely that a soluble keratinate of sulphur was produced. It is known that the process of cornification consists in great measure in a drying up, and it was found that the keratine of the young epidermic cells was more soluble in sulphuretted hydrogen than the older horny layer. The keratolytic property which sulphuretted hydrogen has been proved to possess is not so marked as that of dilute caustic alkalies, but is more noticeable, because sulphuretted hydrogen is more approximated to the acids, and keratine is in general (acetic acid being an exception) not soluble in acids. It is plain, however, that this keratolytic property of sulphur only explains the irritant action — that which causes eczema and artificial pityriasis. But it cannot account for the primary effect of sulphur when, employed in very minute doses, it "dries," cures eczema, and renders the epidermis smooth. This Unna explains by a keratoplastic action which sulphur exercises. It acts as a deoxidizing agent. In becoming horny the epidermis undergoes a reduction of its organic combinations, and a diminution of its vitality. Thus, in treating eczema with sulphur, its employment must be discontinued as soon as the desired effect, the drying up of the weeping surface, has been reached.

The Italian Medical Revival.—No one who watches with any degree of care the progress made in his profession can but admit that in the last few years Italian clinicians and medical writers have been coming to the front in a marked degree; and the *Lancet* calls attention to this in an article with the above heading, which reviews the medical men of Italy and their works in a brief but very satisfactory manner. Turin has now a thriving university under such leaders as Bizzozen and Novaro. Milan is now a great publishing centre. At Bologna Lireta has sustained, with some of the boldest achievements of modern surgery, the fame bequeathed by Rizzoli. Rome has become a center of greater intellectual activity than at any former period in the history of modern Italy, while Naples, with its 1,200 students and its staff of distinguished teachers, is, for numbers and activity, in the very front rank of contemporary medical schools. There are fifty-four Italian medical periodicals. If monographs and treatises are not relatively so numerous as the periodicals, it is nevertheless a fact, that in all departments of medicine and surgery, the Italians are every year giving proof of increased activity, to wit, the writings of d'Antonia, Bottini, and Mazzoni, of De Rossi, Massei, Maturi, and Bufalini.

Rectal Feeding and Medication. —Dr. Wm. Julius Mickle gives some very useful hints in a paper on this subject published in *The Journal of Mental Science*. In using nutrient enemata he advises that:

Alcohol should not be added to albuminous food.

If necessary, the bowels should previously be cleared out by a simple or aperient clyster, and a daily copious cleansing clyster is required in some instances. The bowels may have to be rested, but we must persevere if the first attempt fails. Where it is apt to return, the patient's best position to receive the enema is on the back or left side. The nozzle or tube should be comfortably warm, so should the food injected. The amount injected may sometimes with advantage be small at first, gradually increasing from 2 to 10 ozs. If the foods are ejected, we may try the plan (Dr. Hine's) of depositing them higher up in the viscus by means of elastic tubing and a funnel. But plugging the anus is often necessary, and has been done in many cases.

Conflicting as are the results of experiments on the subject, he concludes that the rectum and colon digest but little, and that, even when inverse peristole is set up, the action of the bowel upon enemata is chiefly absorptive. If so, the food should either be

introduced mixed with digestive substances, or else before administration should in some way or in some measure be digested, and ready for absorption into the venules and lymphatics of the intestinal walls.

The following methods are all considered good:

Leube. Three parts of meat to 1 part of pancreas, both finely minced and mixed with a sufficient quantity of warm water for clysis. Carefully remove all fat and connective tissue. The hog's pancreas is the favorite.

Rennie. To a basin of good beef-tea, add ½ lb. shredded lean raw beef; ʒj fresh peps. porci; ʒij dil. hydrochloric acid; warm for four hours, stir frequently. Beaten egg or alcohol (?) may be added.

Catillon. A saturated solution at 19° C. of peptone of meat, 40 grammes; water, 125 grammes; laudanum, 3 to 4 drops; bicarb. of soda, 3 centigrammes.

Dobell. Cooked, finely grated beef or mutton, 1 lb.; pancreatic emulsion (Lawry and Moore), 1 oz.; pancreatic powder, 20 grs.; pepsine (pig's), 20 grs. Mix quickly, add half an ounce of brandy, and warm water sufficient to bring it to the consistence of treacle.

Henninger. Very lean meat, finely minced, is placed in a glass receiver; water and H. Cl. are poured on, and pepsine, at the maximum of its activity, is added. The whole is left in a water-bath or stove to digest for 24 hours at 113° F.; it is then decanted into a porcelain capsule, brought to the boiling point, and whilst the liquid boils a sol. of sod. carb. is added to it, until it shows a very slight alkaline reaction. Then the boiling liquid is passed through a fine linen cloth. The liquid is reduced in bulk in a water-bath. White sugar is added before administration.

Mickle. A pint of milk, with one-fifth or one-fourth of a pint of water, is carefully heated to 140° F. Two drachms of liquor pancreaticus (Benger's), and 20 grains of bicarbonate in solution in one or two ounces of water, are added. The whole, in a covered vessel, is kept near the fire at 140° F. for an hour or an hour and a half, then thoroughly boiled for two or three minutes. Thus prepared the food keeps for half a day or a day.

In rectal medication Dr. Mickle has made extensive use of enemata of chloral hydrate in many cases of epilepsy and of epileptiform seizures. He gives thirty grains dissolved in two ounces of water, and has found it very useful.

OBSTETRICS AND GYNÆCOLOGY.

THE CASTRATION OF WOMEN.—Dr. Wilhelm Tauffer, of Buda-Pesth, gives in the *Zeitschrift für Geburtshülfe und Gynäkologie*, an account of twelve cases of this operation performed by himself, and then presents the following conclusions: (*Medical Times*).

1. Castration is an operation, which with proper care is not attended with any great risk; the unavoidable mortality being now less than 10 per cent. 2. The operation should be performed with antiseptic precautions and under carbolic spray; the abdominal cavity should be closed; drainage is only exceptionally required. 3. The limitation, that castration is not called for when the climacteric is near, can only be conditionally accepted, because the age at which the climacteric occurs is very different in different individuals, and cannot be foretold. 4. The condition laid down by Hezar, that the ovaries should be distinctly felt before their extirpation is attempted, is an impracticable one. 5. Both ovaries should be removed, even if the disease be limited to one; excepting in cases where special circumstances make it desirable to leave behind the apparently healthy ovary. The reason for removing both ovaries is, that the remaining gland has a tendency to become diseased in the same way as its fellow. . 6. It is generally desirable to remove the tubes as well as the ovaries; and it is unconditionally necessary if there be the slightest appearance of disease in them. 7. Hystero-epilepsy is curable by castration. 8. The symptoms grouped together under the name of hysteria, when rightly analyzed, can often be traced back to ovarian disease. 9. The question as to the influence upon uterine fibroids of the ligature of large nutrient-vessels going to them, without castration, is worth consideration. 10. With regard to prognosis, it is important to remember that the menopause only follows immediately upon the operation in those cases in which the neighboring organs are not diseased; but all inflammatory conditions of them delay the climacteric. 11. The final result of castration can only be determined after the lapse of months. 12. It must be regarded as an open question, how far diseases of the female sexual organs influence the development of certain psychoses. 13. So must the question whether such psychoses are curable by castration. 14. In the interest of unity and comparison of observations, it is desirable that the classification of cases (suitable for this operation) adopted by Hezar should be generally accepted.

NERVOUS DIARRHŒA.—Dr. Silverio Dominguez (*Anales del Circulo Medico Argentino Buenos-Ayres*) says on this subject: The violent emotions may be the cause of diarrhœa, and the female sex is peculiarly disposed to them. This nervous diarrhœa is probably produced by a paralytic dilatation of the intestinal canals from a reflex cause, in consequence the pains are but slight, and the dejections most frequently are aqueous, without being associated with any catarrhal or inflammatory process. The treatment should be directed to the nervous system; assafœtida in four gramme doses as an enema, may be given every two hours to advantage; while as an adjuvant an anti-spasmodic mixture of tilia and valerian may be used.

RESIGNATION.—Dr. C. C. Fite, Secretary of the State Board of Health of Tennessee, resigned that office on the 29th of May, 1884. Dr. Fite has been a faithful and efficient officer, and his retirement is much regretted, not only by members of the Board, but by all interested in the sanitary affairs of that State. His successor is not yet elected.

THE

Journal of American Medical Association.

PUBLISHED WEEKLY.

THE EDITOR of this JOURNAL would be glad to receive any items of general interest in regard to local events, or matters that it is desirable to call to the attention of the profession. Letters written for publication or containing items of information, should be accompanied by the writer's full name and address, although not necessarily to be published. All communications in regard to editorial work should be addressed to the Editor.

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SATURDAY, JUNE 7, 1884.

COLLECTIVE INVESTIGATION OF DISEASE.—As stated in the minutes of the recent meeting of the American Medical Association, published in the JOURNAL of May 24, page 572, the invitation extended by the General Collective Investigation of Disease Committee of the British Medical Association, to coöperate by establishing similar work in this country, was accepted, and the President was requested to appoint a committee of seven members of the Association to take charge of the subject. The President did not announce the names of the committee at the time, and consequently they do not appear in the published minutes. He has since, however, authorized the appointment of the following members to constitute the general committee:

N. S. Davis, Chicago, Ill.; H. O. Marcy, Boston, Mass.; James Tyson, Philadelphia, Pa.; H. B. Baker, Lansing, Mich.; F. D. Cunningham, Richmond, Va.; S. E. Chaillé, New Orleans, La.; and Thos. F. Wood, Wilmington, N. C.

This committee was authorized by the Association to enter into correspondence and coöperation with the General Committee of the British Medical Association; to appoint, either directly or through the agency of the State Medical Societies, subordinate committees in the several States; and to adopt such measures as would best secure the efficient execution of a plan for the Collective Investigation of Disease in this country, so nearly parallel with that established in Great Britain, that the results in the two countries would be capable of mutual interchange and comparison. The State Medical Societies of Pennsylvania and Illinois, and perhaps some of the other States, have already appointed committees on the same subject for organizing the work in their respective States. It is desirable that all such committees appointed by State or local societies, put themselves in correspondence immediately with the above general committee, for the purpose of securing concert of action, economy in both labor and expenditure, and the greatest degree of efficiency in the practical execution of the work.

LEGAL DECISIONS AND THE ILLINOIS STATE BOARD OF HEALTH.—In another part of this number of the JOURNAL will be found a brief notice of two cases recently adjudicated in this State, one arising under a law creating a State Board of Examiners for licensing parties to practice dentistry, similar to the law regulating the practice of medicine, and the other under the last named law. In the first, the direct question brought before the court, was, whether the State Board had the right to go beyond the fact that a dental college was a legally chartered institution, and define what should be the extent of its curriculum or requirements for graduation, and exact compliance with its definition, before granting licenses to the graduates of such college? The decision of the court sustained the authority of the Board. On the same principles it would sustain fully the State Board of Health in enforcing its authority to define what should constitute a medical college on whose diploma a license to practice medicine should be given. In the second case the question presented to the court was, whether under the law regulating the practice of medicine in Illinois, the State Board of Health had the right to refuse a license to a party presenting a diploma from a medical College acknowledged to be in good standing, on the ground of unprofessional conduct on the part of the applicant himself? This was also decided in the affirmative by the court. These decisions are important, not only because they will add to the influence which such State Boards are capable of exerting over the medical colleges, but equally so in showing a disposition on the part of the courts to protect the people from the impositions of men guilty of unprofessional conduct and false pretenses before the public.

NEW JERSEY STATE MEDICAL SOCIETY.—This, the oldest State Medical Society in this country, will hold its one hundred and eighteenth annual meeting, in the Stockton House, Cape May, on Tuesday and Wednesday, June 10 and 11, 1884. President,

Stephen Wickes, A.M., M.D.; Secretary, Wm. Pierson, M.D., Orange, New Jersey.

DIPHTHERIA AND MICROCOCCI.—According to the remarks of Dr. H. C. Wood, in the recent meeting of the Pennsylvania State Medical Society, there is in the ordinary natural saliva of every person's mouth, a micrococcus or plant that cannot be distinguished from the micrococcus of the most malignant diphtheria; they were, as far as could be discovered, identical. The same micrococci were found in great abundance in cases of puerperal metritis, sloughing sores, and gangrenous wounds; from which he infers that diphtheria is not a specific disease, but simply a putrid or septic sore throat, of greater or less severity in different cases. This is returning very nearly to the opinions derived from clinical observation fifty years since.

DIFFICULT PROBLEM. — The Pennsylvania State Medical Society recently adopted the following resolution, offered by Dr. Jackson, of West Chester: "*Resolved*, That a committee of seven be appointed to consider the best method of making a diploma, which permits a man to practice medicine in Pennsylvania, an evidence of real worth." We fear that it may take seven very wise men a long time to discover a practicable method for accomplishing the object proposed.

TEXAS STATE MEDICAL ASSOCIATION. — At the annual meeting of this rapidly developing State organization held at Bolton, April 22 to 25 inclusive, a large number of interesting papers were presented in the Sections, among which was one on the Mineral Waters of that State, by Dr. J. M. Wells, containing much valuable information. The Association voted $100 to the Sims monument fund. The next meeting is to be held in Houston, commencing the fourth Tuesday in April, 1885. Dr. W. J. Burt, of Austin, Texas, is Secretary.

SOCIETY PROCEEDINGS.

GYNÆCOLOGICAL SOCIETY OF BOSTON.

Stated meeting second Thursday of October, 1883, President Wm. G. Wheeler, M.D., in the chair.

Dr. M. D. Church read a paper upon "Post-uterine Abscess," of which the following is a digest:

A brief history of the medical recognition of the disease was first given, it being but recently that this variety of abscess was distinguished from a less limited inflammation of surrounding parts.

Doherty, in 1843, in a paper entitled, "Chronic Inflammation of the Appendages of the Uterus," made the first comprehensive attempt to elucidate the pathology of pelvic inflammation. A brief review of the anatomical features of the lower pelvic region was given, attention being especially called to the large quantity of loose tissue surrounding the uterus, into which exudative products may pass, liable at any time to ripen into pus, such tissues as support the vagina and cervix uteri laterally, from the base of the broad ligaments, Virchow declaring to afford one of the most frequent seats of disease.

Pelvic cellulitis, it should be remembered, may occur both in the puerperal and in the non-puerperal subject. This is not necessarily synonymous with pelvic abscess, pus formation being only one of the results of cellulitis. We may still have the further conditions, viz.: (1) Congestion and effusion of serum, and (2) exudation of coagulable lymph. According to Priestley, in patients enfeebled and of impoverished blood, the inflammation generally results in serous effusion only, but this may be very extensive. Such *e. g.* was a case of Simpson's, who confidently diagnosticated abscess, but the exploring needle gave issue to lymph only. Such effusion may become so extensive and cause such distension as to simulate a solid growth. In a case attended by the reader, the exudation in Douglass' pouch assumed a rounded form, and it was difficult to decide between serum and pus. A study of the anatomy of the parts has been proposed as a means of determination of what course exudative material may follow, but without satisfactory results. If the phlegmonous inflammation is of moderate limits, however, the resulting tumor will pretty surely develop between the cervix uteri and the rectum in the direction of the broad ligament. Other possible locations were also declared.

There may be more than one focus of pus-formation with different issues correspondent. The evacuation may occur through the bladder, rectum, external surface of the abdomen, and rarely by the uterus. The most common place for an abscess to point is much disputed by authorities, but all agree that evacuation within the peritoneal cavity is very rare.

As respects treatment, more reliance is placed by modern therapeutists upon the dietetic management of the case than in the specific action of drugs. Keep patient well nourished, ensure sleep, relieve pain. As respects surgical interference, opinion is divided. Nature will generally secure final evacuation and in a manner favorable to the patient. Such casualty, *e. g.*, as an opening into the peritoneal sac, as already said, being very rare. If an artificial opening is to be made, the median line behind the cervix, unless the tumor point toward the rectum, is the point of election. The opening must be sufficiently large and a drainage-tube be inserted.

The following summarized statement closed the paper:

1st. Parametritis and perimetritis are rarely idiopathic or primary.

2nd cause. Either mechanical injury, uterine, tubal or ovarian disease of an inflammatory character, possibly tuberculous or malignant.

3rd. Cold, suppression of milk, etc., appear to have no etiological connection.

The question was proposed, At what time is a woman comparatively secure from attacks of parametritis and perimetritis? Also, How long after parturition, gonorrhœa, or local surgical operation, may she continue in danger?

Dr. A. P. Clarke followed with a series of reports of cases bearing upon the same subject, of which an abstract follows:

1ST CASE.—Mrs. —— had been married five years; had never had a living child. Upon summons, found her sitting up, complaining of pain in bladder and left groin; had had chills, which were referred to a coincident sore throat. Pain steadily increased in extent and severity. Repeated vaginal examinations failed to discover any marked and localized point of tenderness. Later the pain became more severe, with an occasional chill, which was invariably followed by profuse sweating. Diagnosis, pelvic cellulitis, with probable formation of abscess. No fluctuation nor marked swelling present, but at times there could be elicited greater tenderness behind the uterus than in any other part. Patient stated she had had a similar experience one and a half years before, but had recovered, and, in the opinion of her physician, had not had an abscess, but some kind of a nervous attack.

Later, on vaginal examination, a small quantity of pus was discovered, but its source could not be determined. She now became easier, and was able to be about the house. Again she was suddenly taken worse. There were several repetitions of this experience, and indeed, she had two subsequent attacks, in which a very little pus was seen, aside from what escaped with vaginal discharges. Still, the general character of the attacks, the chills, sweatings, etc., seemed to indicate suppuration, and such was the diagnosis.

The following year she was seized with all her old symptoms, but having in the meantime moved from the place of her former residence, she was obliged to call in another physician—an eminent surgeon connected with the City Hospital, Boston. In his hands the case remained for a short time until Dr. C. was called in to take charge. The surgeon, in the meantime, had wholly discredited the diagnosis, which had been made on occasion of former seizures, and did not believe she had ever had abscess. He had not used a speculum as an aid to diagnosis, nor, indeed, instituted any thorough local investigation. The next day, with the help of a Sims' larger speculum, and the assistance of a view in a good light, Dr. C. was so fortunate as to detect a point where there seemed to be fluctuation, and by means of a small trocar and bistoury, was enabled to let out a large amount of fœtid pus, to the speedy and great relief of the patient. She had since removed beyond observation, and is understood to have had since then, still another attack, of which, however, no definite knowledge has been obtained. The original cause was, doubtless, a hæmatocele or some accident to the perimetric cellular tissue upon occasion of abortion. (Dr. C. followed with several similar reports, of which, however, a digest cannot be given for lack of space).

The chair remarked, as introductory to the discussion, that Dr. Clarke had been unusually fortunate in his series of cases—certainly as judged by his own experience.

Dr. M. L. Brown referred to a class of cases not considered by Dr. Church, where we have what may be called a peri-uterine abscess. In such occasional cases, doubtless, where death had followed, the patient might have been spared had the diagnosis been made earlier and the pus evacuated. Such cases too often break into the peritoneal sac and cause death, whereas the abscess, which Dr. Church had described, is more apt to make for the surface, burrowing under the sheath of muscles.

Dr. A. P. Weeks recalled a case, previously reported in part, where a Boston physician had attempted to replace a retroverted uterus, allowing the patient immediately after to return to her home in Chelsea. A week afterwards, Dr. W. detected fluctuation, and with Dr. Warner's assistance, had aspirated. The woman had never fully recovered, was not well to-day; the uterus was low down in the pelvis and fixed, and the tissues about it hard, contracted and unyielding. Saw another case while in the country; it had run on since Christmas and continued till the following May. The accompanying swelling had been diagnosticated as pregnancy by successive physicians, and had been called a tumor. There was a mass rising up to the crest of the ilium and filling the cavity as high as the umbilicus on the right side; was very tender. A spiritualist was called in who made certain motions and required certain movements on the part of the patient, when the tumor suddenly burst, was discharged by the rectum and the patient got well.

In such cases it is important to make an early diagnosis and evacuate as soon as possible. Once that the pus gets loose, it burrows and runs everywhere. Recollect a case of Dr. Wheeler's where the pus, after such history, presented at many points and continued to discharge for two years. Dr. Mundé, in a recent paper, had distinguished perilymphangitis from cervicitis; in the former condition applications of iodine do harm. As to treatment, Dr. Weeks had used mercuric chloride, hot injections, iodine locally applied, and insisted upon rest.

Dr. Wheeler emphasized the difficulty of getting to the bottom of the sac; the distribution of the deep fascias causes the pus to appear at the most unlooked for points. We make an opening at a point so remote from the primary abscess that we have a long, fistulous passage, and cannot know what the most pending point is. In Dr. Weeks' case, he opened in five places, but could never detect a point of fluctuation or bagging internally. Patient suffered for three years from these fistulous openings before final closure and recovery. Now all this could have been avoided if diagnosis could have been made, and proper measures taken, early.

Dr. Stoddard applied the same criticism to the case first reported.

Dr. Clarke rejoined: One patient had been told by a prominent physician that there was no pus there, and it was very difficult to prove that there was. So with another patient—a prominent surgeon had declared that there was no abscess; and yet she had chills and other symptoms of suppuration; but he was fortunately able to demonstrate the fact of the presence of pus by means of a speculum in a good light.

Dr. Church responded that at least three authors unite in reporting cases in which there having been constitutional evidence, but no local signs of pus, it was believed there may have been an opening into the bowel so high up that pus mingled with the fæcal matters and thus escaped detection when discharged with the excrement.

Dr. W. S. Brown thought Mathews Duncan, in writing upon the present subject, sometimes made too nice distinctions. The relation of gonorrhœa to the disease under discussion was of interest. Had at present a case under observation, where both husband and wife acknowledged such origin; and he had his suspicions in another case. Inflammation, thence resulting, may present the tissues so agglutinated together that we can hardly tell one from another. Veins and lymphatics are also affected, and patient suffers from pains passing down the legs. As respects the question of gonorrhœal implication, the woman does not know and the man will not tell,—this is too often the case, at least,—and we are left to our own unaided investigations. As to treatment, one thing is essential,—early evacuation, washing out the cavity and drainage. Prompt diagnosis is of the utmost importance. Here is an argument in favor of making vaginal examinations. There is an unfortunate prejudice with many physicians in this direction, but such examination should be insisted upon whenever we have cause to suspect inflammation.

Dr. Church proposed the question: Called to a case of a week's standing, with history of pain, a soft spot is found, but even by bimanual examination, no evidence of fluctuation is afforded:—should an incision be made at a venture, or should the physician still wait?

Dr. Wheeler replied, If there are well-marked constitutional symptoms, with hardness indicating pressure of pus, it is no longer necessary to wait for fluctuation now that we have the aspirator. It is the surgical part in these cases that is apt to fail of due attention; there is too general a fear that by interference we shall do the patient harm; we rather do harm by waiting, as the pus will burrow, and, not having contact with the air, occasion but little trouble to the patient until it finds its opening; then the mischief is done, as in Dr. Clarke's case.

Dr. Weeks estimated that a week's time was short for pus to be formed in such a case; moreover, we should not expect pus until after the chills and sweating. Then we hardly get fluctuation in this location so much as the so-called bagging.

Dr. W. S. Brown had observed that some hesitate on account of hæmorrhage, which it is especially hard to avoid and control. A good method is to make a very small opening, and then dilate as with Hanks' dilators, and tear the parts. Thus we get a better, safer opening, and one not so liable to close.

Dr. Norris referred to a class of subjects who have what may be called *pyrotechnic* pelves—inflammatory subjects, who are always ready to take fire, and on small provocation. Such are pretty sure to have trouble, and make trouble, after any surgical operation. Had a case in mind to whom mischief came after every confinement, four in succession. She would have an inflammatory seizure even after the passage of a sound, when in a non-puerperal state. Should expect such subjects to cause especial trouble in the complication under question.

And they are not to be recognized, rejoined Dr. Field, by any sign or condition they carry about them. The fact that such subjects are very sure to afford a certain ratio out of all patients treated, should serve as a constant warning against gynæcological interference—even to the passage of Simpson's sound—at the office of the physician, the woman being expected to go home afterward. The uterine patient should always be treated upon her own bed, where she can be kept absolutely still from the moment that the examination is completed or the application made, for an hour or a day or two afterward, as the case may be.

Society adjourned.

HENRY M. FIELD, M.D., Secretary.

PROCEEDINGS OF THE SUFFOLK DISTRICT MEDICAL SOCIETY.

SECTION FOR CLINICAL MEDICINE, PATHOLOGY, AND HYGIENE.

ALBERT N. BLODGETT, M.D., SECRETARY.

MARCH 12, 1884.

Meeting called to order at 8 o'clock. Dr. Edes being absent, on motion of Dr. J. W. Farlow, Dr. E. T. Eastman was elected chairman *pro tem.* A summary of the records of the last meeting was given by the Secretary, which was approved.

The first paper of the evening was by Dr. G. Liebmann, entitled

SPINAL IRRITATION AND NEURASTHENIA.

Dr. S. G. Webber in opening the discussion said that the difference between neurasthenia and spinal irritation is not so definite as the author states in the paper to which we have listened. The two diseases depend upon similar conditions. The distinctions made in the paper are purely arbitrary. The two affections run into each other. That state or condition which the author calls "false spinal irritation" depending on irritation of the pelvic organs cannot be too constantly kept in mind. We do not always realize how much disturbance may arise from this cause, not only in women but also in men. Dr. Webber is far from satisfied with the usual explanations of spinal irritation, and does not believe that

anæmia or hyperæmia of the cord is a necessary or universal condition. In many cases there may be at times excess and at other times deficiency of blood supply. In most patients it is doubtful if the symptoms depend on disturbance of the circulation. There is probably an exhaustion of the nerve-cells, often in the brain, sometimes in the cord or in the sympathetic system. Their reactions are irregular, and disturbances of function and secretion result. Heredity exerts a grave influence in neurasthenia and spinal irritation, and is an important etiological factor in these diseases. In such cases the parents, frequently one, often both, have not strong and vigorous constitutions. The scenes and influences of childhood are sometimes at fault, and the neurotic condition may be developed where there is no hereditary tendency. Late hours are not beneficial to children, but predispose to the various neuroses. We do not see children romping and playing nowadays as was the habit years ago, but they go to evening parties, sit up late, and eat stimulating food at unseasonable hours. Too warm and ill-ventilated rooms are also doubtless predisposing factors in the production of nervous diseases. Our school-rooms are often kept at a temperature of 72° F. to 75° F. Children are also sent to school at too early an age, and are thus exposed to unfavorable influences at a perilous period in their nervous development, and frequently become the subjects of neurotic derangements.

Dr. J. J. Putnam said that he did not believe that there was any clinical or pathological advantage in trying to draw a line between neurasthenia and "spinal irritation," so called.

The former term, although vague, is a convenient one, but does not, like the latter, prejudge the pathological diagnosis. Our knowledge of the functions of the spinal cord does not justify us in referring the majority of the symptoms of so-called "spinal irritation" to the disease of that organ. On the contrary, the complicated cerebral functions, including those which have to do with the animal and vegetative processes, probably are affected in all the cases of this class, and this affection furnishes their predominating characteristics. It is on these functions that the evil influences transmitted by heredity mainly fall.

At the same time it is not to be denied that the ganglia of the spinal cord and sympathetic may share in the disorder. Dr. Putnam agreed with the reader and with Dr. Webber that the tendency has been to pass slightingly over the nervous symptoms to which diseases of the male genital organs may give rise, although it is true that congenital instability of the central nervous system is usually needed to furnish the material for these symptoms.

Dr. Douglass Graham said he thought we were inclined to be myopic in limiting our observation to reflex neurasthenia arising from irritation of the sexual organs alone, even if this were one of the most frequent causes. Pain or disturbance in any organ, especially below the diaphragm, he said, gave rise to reflex neurasthenia. Indeed, neurasthenia forms the background to the picture of all diseases and injuries whether of an organic or functional nature. The simplest form of neurasthenia is the natural and not unpleasant fatigue which results from an active and satisfactory day's work, from which we recover by food and sleep. After this comes the fatigue from which we do not recuperate as usual, the fatigue of being overworked, or in common parlance "played out," when rest and change are of the first importance. Thirdly, there are the continually wearied, wakeful, nervous business or professional men with numerous and varying ailments who have learned by experience that "the labor they delight in physics pain," and who find more relief in work than in rest Many physicians, doubtless, find themselves in this class, especially at this time of year. Then there are the neurasthenics who are such because they have no object in life, who are spoiled children with plenty to live on, and usually more, who can do what they please and cannot do what they do not please, who take delight in telling of all the eminent medical authorities whose care they have been under without benefit, and who are never happier than when they can be regarded as interesting, by trying some method of treatment that is novel to them, so that they may finally have the satisfaction of saying that it did them no good. A classification of neurasthenia based on causation might be indefinite.

Dr. G. L. Walton considered the brain the chief if not the only sufferer in the cases under consideration. Certainly such symptoms as cramps and pain in the back and loins could arise from the brain as well as from the cord, while the mental symptoms could only arise from the brain. Whether the spinal centres were implicated or not, enough had been said to show the non-existence of a distinct class of cases to be gathered under the term spinal irritation. In this case further division into pseudo-spinal irritation was absurd. He thought that all we could say by way of pathology at present was that there is a large number of nervous patients whose symptoms fall neither under hysteria nor hypochondria, whom we may name neurasthenical, locating the functional disturbance in the central nerve-cells. It remained to inquire if the sub-classification proposed would prove of clinical value. The impression conveyed by the paper was that the practitioner had only to ask himself whether the patient before him suffered from neurasthenia, spinal irritation, or pseudo-spinal irritation, and to regulate his treatment accordingly. In point of fact all these cases had to be treated as individuals, one needing rest, another exercise, and so on, any attempt to treat in classes being destined to prove a failure.

Dr. Morton Prince spoke as follows: There is one point which has been raised here on which I wish to say a few words, and that is the question of the cerebral origin of the symptoms of spinal irritation. I cannot agree with Dr. Putnam as to the cerebral origin of these symptoms. This view has lately been advanced with considerable force in an article by Dr. Walton. That some of the symptoms met with in spinal irritation, or neurasthenia (as you may choose to term it), such as vertigo, melancholia, anorexia, pains about the scalp, mental weakness and irritability, and many symptoms distinctly hysterical, are cere-

bral in their nature every one admits. About such symptoms there is no question. But that there is another larger group of symptoms which are of spinal origin, I believe there is also no question. Such symptoms are numbness and pricking in different parts of the body, pains over the spine, neuralgic pains of all kinds. In some cases of nervous prostration the cerebral symptoms may be so prominent as to predominate. Such cases have been denominated *cerebrasthenia*, in distinction from others where the cord and nerves are principally implicated.

When a functional nervous disease is met with, the symptoms presented are individually such as are caused by organic disease of the same segment, the difference being due not to the essential character of the symptoms, but to the method of grouping, the absence of some symptoms and presence of others, the onset, course, severity, etc. The symptoms met with in functional disease of the cord are such as occur in organic disease of the same part, and the symptoms observed in functional disease of the brain are such as occur in organic disease of the brain. In other words, the symptoms caused by functional or organic changes in a part are conditioned by the physiological functions of the part. For example, we get atrophy with the electrical reaction of degeneration in the muscles of the limbs from organic disease of the anterior cornua of the spinal cord and not from disease of the brain, and conversely we get aphasia from disease of the brain and not from disease of the cord. Now, the group of symptoms met with in pure spinal irritation(?) are such as are met with in organic disease of the cord and not of the brain; and therefore there is every reason to believe that their origin is spinal and not cerebral, and especially is this the case when in severe cases the symptoms are so similar to, nay, almost identical with, those produced by inflammation of the cord and its membranes, that it may fairly be questioned whether we have not to do with an organic and not a functional disease. I cannot help thinking that some cases which have been described as spinal irritation are in reality mild forms of inflammation.

I do not mean to say that some of these symptoms may not occur isolatedly in organic brain disease. That may happen with some symptoms, as, for example, anæsthesia and paralysis, which are common to both cerebral and spinal disease. But they do not occur in similar groups, and some symptoms are not present at all. In functional brain disease nearly every kind of symptom may be met with, but here the grouping is different, and it is a question whether some of the symptoms of functional brain disease, as hysteria, may not be dependent upon implication of the cord. In fact, this is much more likely than that the fundamental symptoms called spinal irritation are due to cerebral disease.

As this is a practical and important question, it may not be out of place here to refer to the argument advanced in the paper I have just mentioned. Pains in the back and sensitiveness over the spine are referred to irritability of the *cerebral* centres, because the centres for *feeling* are in the brain and not in the cord. A similar process of reasoning would as well explain the pains and tenderness complained of in sciatica, spinal meningitis and myelitis by a disease of the brain.

In regard to the differentiation of spinal irritation from neurasthenia, Dr. Prince was glad to hear Drs. Webber and Putnam express doubts as to whether they could be regarded as distinct diseases. If we examine the descriptions of spinal hyperæmia, anæmia, irritation, and neurasthenia given in the text-books, it would be found impossible to form any clear and definite picture of each as distinct from the others. Erb, to be sure, had described neurasthenia as characterized by being more common in the male sex, while the symptoms exhibited were principally sexual and motor weakness, sensory disturbances being less prominent. Spinal irritation, on the other hand, he had practically limited to females, while the sensory disturbances were very prominent. Ross, in England, had followed Erb's description. In America, on the other hand, the speaker thought that it was the general experience of neurologists that neurasthenia was greatly more common in women, while the group of symptoms included under the name was identical with that described in Germany and England as spinal irritation. It did not seem, then, that there were sufficient grounds for differentiating two diseases.

It is impossible that the disease could be occasioned by molecular changes in the spinal cord without having resort to the theories of anæmia or hyperæmia. Sigmund Mayer has made some investigations on the changes which physiologically occurred in normal nerves. His observations were made on the nerves of a large variety of animals and also of men, and showed that the peripheral nerves of vertebrates are not fixed structures, but are continually going through a process of degeneration, followed later by regeneration and a return to the normal condition. The changes observed were similar to those which take place in a nerve which has been divided or otherwise injured. These changes he believes to be constantly taking place, so that in every nerve may be found a number of fibres in this condition.

The thought naturally suggests itself whether these changes may not play some important part in the production of functional nervous diseases. Mayer suggests that this may be the case, and that those neuroses represented by transitory impairment of the sensory and motor functions are due to an increase in the normal number of degenerated fibres, and thinks that these changes are destined to become prominent factors in future neuro-pathology. If these results shall be confirmed by other observers, we have here a means of understanding how disturbances of sensation and motion such as are met with in neurasthenia may be caused by molecular changes alone, and this thought is reënforced by the fact, that while the anatomical changes which are said to occur in normal nerves are similar in kind to those observed in an injured nerve, differing only in degree, so, many symptoms met with in spinal irritation (neurasthenia), such as formication, numbness, pain, muscular weakness, etc., are similar in *kind* to those caused by injury to a nerve, though they differ in

degree, grouping, mode of onset, and persistency. If similar changes shall also be shown to take place in the central nervous structures, we shall have a complete theoretical picture of anatomical changes which may be at the bottom of neurasthenia.

The idea at present is merely speculative, but is interesting as suggesting a direction for future investigation.

Dr. T. A. DeBlois read a paper upon

TONSILLITIS.

Dr. J. W. Farlow opened the discussion upon this subject as follows: I agree with Dr. DeBlois in thinking that it is not possible to draw so sharp a line as is generally done between follicular, parenchymatous, and phlegmonous tonsillitis. When the parenchyma is affected, the follicles are also liable to be, giving rise to the secretion, more or less of which we find in most cases. Of two cases which begin and continue alike for several days, one may remain an ordinary case of tonsillitis, while the other goes on to the formation of an abscess.

The difficulty of knowing whether diphtheria or some other disease is to follow what looks at first like simple tonsillitis, has been well described by the reader, as also the need of "hedging" in communicating the diagnosis to the friends of the patient.

In cases seen early where there is much fever, I am in the habit of ordering a Dover's powder or aconite, to be followed by a saline in the morning. I have never satisfied myself that I had benefited a case by the use of guaiac or chlorate of potash.

I have never found astringent gargles of more use than very hot water. I direct the patient to fill his mouth at frequent intervals with hot alkalized water and hold it for several minutes. He is then to let the water run out by holding his head over a basin. This serves to remove the thick, tenacious secretion of which patients always complain, and which they find great difficulty in expectorating. Gargling is always a painful process in such a case.

I find relief from scarification, especially when the uvula is œdematous. When the presence of pus is probable, a deep incision, whether pus is found or not, makes the patient much more comfortable.

Dr. Prince thought it was a very interesting paper, and agreed with the reader in what he had said regarding the efficacy of the different varieties of treatment that were in use. For himself, he took a different view of the pathology of the affection from the reader, and believed in the *constitutional nature of the disease*. This was a point of considerable importance from the stand-point of treatment. He did not mean to say that every case of follicular tonsillitis was the expression of a constitutional fever. On the contrary, as in inflammations in other parts of the body, there was a local as well as a constitutional form.

Specialists who principally have to do with cases in dispensary and office practice meet with the former variety, while general practitioners see the constitutional form. The latter class of patients are usually too ill to leave their beds, much less the house, and are not found in out-patient departments of hospitals, or at least not till the disease has run its course. In this way the difference of opinion regarding the pathology of the affection can be explained. He thought that specialists were more inclined to see in follicular tonsillitis only a local affection, while general practitioners more commonly thought it of constitutional origin.

His own views of the constitutional nature of the affection are based upon various facts; among others, the severity of the constitutional symptoms observed. Even when associated with insignificant local inflammation, it is not uncommon to see high fever, great prostration, severe backache, sweating headache, anorexia, and stupor, followed by protracted convalescence, though the local trouble was so slight as hardly to induce the patient to use the gargles, etc., prescribed.

As a result of his studies he has found:

(1.) With slight local inflammation high fever and severe constitutional disturbance, and *vice versa*.

(2.) Slight local inflammation and slight increase of temperature, combined with severe constitutional symptoms, showing that the latter were not dependent upon the fever.

As "hospital sore throat" the disease was very common amongst internes and nurses in hospitals. He had found as a result of his inquiries that 63 per cent. of the internes in the Boston City Hospital had the disease, and that 59 per cent. of the nurses in the hospital at the time the inquiry was made had already had it. Many more would probably have it before their term of service was finished. Under these conditions the disease was usually very severe, more so than could be accounted for on the theory of a simple local inflammation.

The disease also occurred in epidemics, of which several had been reported. He had recorded two in a paper on this subject read before the Society about two years ago. In the epidemic form it was certainly constitutional.

The reader had said that he himself was liable to the disease and was frequently affected, but Dr. Prince believed that while this might be true of simple catarrhal sore throat, such as is met with in dispensary practice, the form to which he referred he believed usually occurred but once in the same individual.

In regard to treatment of this form, he had found the best to be painting the throat frequently, every hour or two, with co. tinct. benzoin. The tonsils must be thoroughly covered each time so as to leave a deposit of the yellow gum upon the surface. This always relieved the pain, and enabled the patient to swallow with comparative comfort. He had not yet met with a case which was not benefited by this, though of course it could not be inferred that the remedy would never fail. An ice-bag around the neck gave great relief to the head symptoms, while sponging the body with alcohol and water did the same for the backache. He also gave Dover's powders at night, and sometimes during the day. The constitutional symptoms, in his experience, called for more active treatment than the local manifestations.

Dr. Cobb mentioned a case of tonsillitis occurring

in a Swedish girl, accompanied with the appearances of abscess. On puncture, a small amount of pus was liberated, but the entire quantity was not evacuated. Within a week the girl was admitted to the City Hospital with scarlet fever. The question was asked if such cases were frequent.

Dr. DeBlois stated that one such case had recently come to his notice. The case was one of follicular tonsillitis with much depression and exhaustion of strength. The prognosis was of a grave character from the threatening nature of the symptoms, which led to the apprehension of some other more serious disease, and a few days later the patient suddenly expired while being brought down stairs to be taken to the City Hospital.

The following particulars in this interesting case were communicated by Dr. George G. Hayward, the physician attached to the dispensary district in which the patient lived.

DIPHTHERIA WITH COMPLICATIONS.

Patient, male, nineteen years of age, laborer, single, born in Ireland, had only been in this country a few months, was a strongly built man, of temperate habits. He first came under my charge December 12, 1883, and was treated at that time for dyspepsia and a heavy cold, from which he soon recovered, and after a few days went about his work again. I next saw him February 2, 1884, and learned that the day previous he had been to the Boston Dispensary Throat Department, where he had been treated, and that diphtheria had been suspected. At this time I found him with a high fever. Temperature 105° F., rapid pulse, tongue heavily coated, and all the soft parts covered with a distinct membrane, some of which was with difficulty removed. On further examination the body was found covered more or less thickly with a fine rose-colored eruption, more especially marked upon the lower part of the abdomen and thighs (where he was actually the color of a boiled lobster).

Diagnosis, was made of diphtheria with scarlatina. I afterwards learned that there had been scarlet fever in the house a few weeks previous.

Treatment, was Dover's powder at night, hot gargles, or rather douches, steamed flannels externally, changed often, and replaced by dry ones, steam inhalations, and as much steam as possible kept in the room, carbolic sprinkled about the floor. The mouth was swabbed out three times daily with hot water applications.

Diet. Milk, beef-tea, ice. Stimulants in milk occasionally. Nourishment was taken fairly well until the last day, so much so that it was only given by the mouth.

February 3. Temperature 104° F. About the same condition, breathing well, however; treatment continued.

February 4. Temperature 103.5° F. Seemed somewhat improved and brighter; more membrane removed, and it was stated that some more had been coughed up during the night.

February 5. Was called early, on account of alarming symptoms. Temperature 104° F. Face flushed; skin dull color; pulse slow and feeble, but breathing was good; voice very feeble. There was no indication for tracheotomy, which I had supposed might be required from what was told me of the symptoms.

The trouble seemed to be rather failure of the heart's action than anything else.

Dr. Kingman saw the case with me in consultation, agreeing with me as to diagnosis, and we decided it was best to send the patient *at once* to the hospital.

The heart was examined at this time as it had been several times previously, and no organic trouble could be detected.

Digitalis was at this time given, followed later by carbonate of ammonia, and the patient was ordered to the hospital. On leaving him he seemed considerably improved, and roused himself enough to shake hands and ask me to come and see him.

Brandy in milk was ordered before starting.

Instead of taking him at once, he was left three hours, and while being carried down stairs, having just reached the lower landing, he fell and died soon after. This would seem to indicate failure of the heart, and had it not often been previously examined, should have been inclined to suspect organic disease.

The case seems to me doubly interesting,—

(1). As a rare combination of diseases.

(2). As to the cause of death.

Dr. Farlow asked if any member had been able to observe any beneficial result from the employment of chlorate of potassium in tonsillitis.

In answer to Dr. Farlow's question as to the curative effect of chlorate of potassium in tonsillitis, Dr. V. Y. Bowditch said that he had no faith in its curative effect, but believed that hot gargles containing it often gave great relief both from the grateful sense of warmth and from the fact that it seems to cleanse the mouth from the thick secretions and disagreeable taste which are present. He also testified to the efficiency of the guaiac lozenges in relieving soreness of the throat, and recommended those of the London Hospital Pharmacopœia as being pleasant to the taste.

Dr. Disbrow asked Dr. DeBlois if there was any means of aborting the disease in its early stage. Speaking from his own experience, having suffered for many years with attacks of tonsillitis, he found by painting the tonsils with tinct. iodine comp. two or three times a day in its early stage, he prevented the formation of pus and cut short the disease. He had also found a strong solution of nitrate of silver useful, and had used the comp. tinct. guaiacum, but had not found any benefit from it. He had used, to hasten the formation of pus, an old domestic gargle composed of vinegar, water, sugar, and capsicum in conjunction with hot poultices externally. In follicular tonsillitis he had found painting with tinc. iron very useful. In regard to the guaiacum troches, they have been very useful in a case of irritative cough after other means had failed.

Dr. DeBlois thought that patients often swallow with less difficulty after the use of chlorate of potash, and this is certainly of benefit as far as it goes. If we can remove the pain and discomfort, the inflam-

mation will in many cases take of itself. Scarification is often of service in the same way. Troches containing guaiacum are also often of service in tonsillitis.

Dr. Harlow stated that in the opinion of an eminent Boston physician, now dead, guaiacum never did anybody any good except the apothecary.

Adjourned at 10.5 o'clock.

STATE MEDICINE.

THE ILLINOIS MEDICAL PRACTICE ACT.

Recent decisions in two cases, one under the act to Regulate the Practice of Medicine in Illinois, the other under the Dental Surgery Act, sustain the right of the State Board of Health to determine the status both of a college and of a practitioner. Under the latter act the Supreme Court refused the petition of Isaac Sheppard for a writ of mandamus to compel the State Board of Dental Examiners to issue him a certificate or license, based upon a diploma of the Indiana Dental College. The Board refused the license on the ground that the college was not a "reputable institution." It was argued that the law constitutes the Board, judges of the standing of a college, and there is no power of review vested in any other body. "If the Board should arbitrarily or unreasonably abuse their discretion, and refuse a license without any reason therefor, there is a remedy for such abuse of said discretionary power." But there was no ground for claiming that this was the case in the present instance. The Board in its judgment had decided that the curriculum of study and requirements for graduation of the Indiana Dental College were not such as to entitle it to be classed as "a reputable dental college;" and there is no power in that law, given to any person or body to review and set aside, or confirm, the exercise of the discretion by the board. The petition for a mandamus was denied.

In the case of the State Board of Health against C. Buel Rice, of Cincinnati, a graduate of the Medical College of Ft. Wayne, tried in the Sangamon County Court, the defense set up the plea that, being a graduate of a "legally-chartered medical institution in good standing," the defendant was entitled to a certificate of the Board; and that it was not competent for the Board to inquire into the moral or professional character of such graduates. On the part of the prosecution it was shown that charges had been presented to the Board, alleging that Rice was in the employ of, and associated with, the "K. & K. Surgeons," a firm of advertising quacks, from Cincinnati and elsewhere, and that, in various ways connected therewith, his conduct was unprofessional and dishonorable within the meaning and intent of the Medical Practice Act. Upon these charges the Board had refused to issue Rice a certificate until he had disproved the same. Instead of making any attempt at such disproof, Rice continued to practice; whereupon he was arrested for practicing without the necessary certificate. The facts were admitted by the defense, but, as already stated, the court was asked to dismiss the suit on the ground that it was obligatory on the Board to issue its certificate to the possessor of a genuine diploma of any "legally-chartered medical institution in good standing," regardless of the moral or professional status of the individual. This the court declined to do, but found the defendant guilty, and assessed a penalty of $50 fine and costs.

BOOK NOTICES.

Annual Report of the Health Officer of the District of Columbia, 1883.—This report by Dr. Smith Townshend is filled with the usual valuable tables for reference, and is prefaced by a congratulation on the part of the health officer that the efforts of his department were successful in preventing the introduction of small-pox into the city during its prevalence in an epidemic form in Baltimore in the fall and winter of 1882–83, which certainly shows watchfulness and energy when we reflect that the two cities are not forty miles apart, and communication is constant and varied. Washington it seems with its population of 191,980, has 15,611 sick poor cared for by this office, of which 10,264 are colored, and it costs $3,156.85 to furnish them with medicines. There certainly seems to be no waste expressed in these last figures. Dr. Townshend handles the subject of trade nuisances in a very practical and satisfactory manner; he devotes some space and illustrations to showing how the odors, etc., in making ammonia, illuminating gas and asphaltum are got rid of. With ammonia the gasses are passed in an upwardly-ascending (?) current over moist retarding surfaces and upward through a descending spray of water, so as to cool and wash the gases, and then turning them in their washed and cooled condition at an intense heat by forcing them into intimate contact with incandescent or ignited combustible and inflammable substances. To explain this properly of course requires reference to the illustrations. The apparatus has been in use for over a year and seems to have accomplished all that is claimed for it. With asphaltum the high heat used (700° F.) in refining it, results in the formation of hydrogen sulphuret, bisulphite of carbon and other very disagreeable gases. To destroy these gases combustion is employed by exhausting them from the covered kettle containing the heated asphaltum, through a close conduit into a furnace, where they are consumed. The thoroughness with which this is done remains yet to be seen.

Under the head of vital statistics the tables show for the year ending June 30, 1883: *Deaths*, 4,286, of which 3 are set down to smallpox; 24 to croup, 85 to diphtheria, and 125 to scarlet fever. Consumption is credited with 730, but of these less than 17 per cent. were white natives of the District.

Births, 851 white males, 833 white females, 715 colored males, 715 colored females, in all 3,116.

Marriages, 607; whites; 235 colored; 1 mixed. The register shows 448 practicing physicians within the District, of whom 15 are women.

One of the most interesting features of this report is the fact that the diseases, to a certain extent, are located on maps showing the different squares of the city.

FOREIGN CORRESPONDENCE.

LONDON, May, 1884.

At the annual meeting of the City Orthopædic Hospital in Halton-Garden, it was stated the past year's working of the charity was the most satisfactory for many years, showing that as many as 2,500 patients had been admitted and twelve extra beds had been provided. It was stated that since the opening of that and other orthopædic institutions the number of deformed poor walking about had become appreciably less.

A gargle made of strong black tea and used cold, night and morning, is now the fashionable preventtive against falling a victim to sore throat during the cold winds of the spring.

The University Tercentenary celebration at Edinburgh has passed off without a hitch, largely owing to the authorities having wisely altered their original plans so as to allow the students to take a prominent part in the entertainments. The young gentlemen, appreciating the justice of this arrangement, were on their best behavior, and only created a very moderate disturbance when some of their guests abused their hospitality by inflicting on them long speeches in foreign languages. During the meeting attention was drawn to the unnecessarily high salaries which the Edinburgh professors enjoy. At Oxford or Cambridge the busiest "Don" is only able to make about £1,000 a year. In Edinburgh professors can usually manage to earn £2,500, a difference which is not to be accounted for by the superior fame of the northern teachers. At Oxford and Cambridge the income of all the teachers is fixed by law; at Edinburgh they are allowed to make what they can out of their pupils.

The inaugural lunch of the newly formed Society for the study and Cure of Inebriety has just passed off in a most successful manner at the premises of the Medical Society of London. The Society is to consist of medical men as members, and laymen as associates, for the study of the various physiological and psychological causes of inebriety. The president is Dr. Norman Kerr, who occupied the chair, and in his inaugural address after the luncheon said that although the Society had only been in existence six months it already numbered 67 members. He went on to say that so far from everything being known about intemperance, there was nothing indeed accurately known, that even of the action of alcohol on the healthy living body our knowledge is limited, and there is a vast field of inquiry to be covered by close and patient investigation ere the truth can be elucidated. Inebriety was a disease, but he had no sympathy with those who ignored its moral and spiritual aspects and recognized only the physical. To say that addiction to drinking was always and never anything else than a physical disease was not science but nonsense. He would not dogmatise on disputed points as to whether inebriety was a sin, a vice, a crime or a disease. In his judgment it was sometimes all four, but oftener a disease than anything else, and even when anything else generally a disease. The object of the society was to investigate, by strictly scientific methods, the various causes, and to educate the professional and public mind to a knowledge of those causes and to the recognition of the physical aspect of habitual intemperance. Among the associates of the undertaking are the Earl of Shaftesbury and McTool, the actor.

Dr. Ebstein's much talked-of treatise on the cause and cure of obesity has appeared in an English dress, and is attracting much attention, especially among the ranks of those who carry "too much weight." Professor Ebstein agrees with Mr. Banting in advocating regimen alone as the only safe cure for an inconvenience which most frequently results from too much food. But he adopts a dietary widely different from those prescribed by Mr. Banting, or rather Dr. Harvey, the practitioner whose maxims that gentleman enlarged and made his own. The crucial difference is on the question of eating fat. Fat is the sheet-anchor of Dr. Ebstein. No dyspeptic, we are assured, need fear fat so long as he does not take too much, and, indeed, so admirable is that substance, long dreaded by delicate stomachs, that, by checking nitrogenous waste, it appeases thirst as well as hunger, a fact, in part at least, known even by Hippocrates. Mr. Banting permitted any fish except salmon, but Dr. Ebstein encourages his patients to enjoy, "in moderation, of course," not only this dish but *paté de foie gras* and similar delicacies. Sugar is tabooed as well as sweets of all kinds, and potatoes in every form he prohibits unconditionally. Three to four ounces of bread per day are permitted, and of vegetables, asparagus, spinach, cabbage, and the various legumes rich in albumen are allowed. Of meats he excludes none. He allows three meals a day, but on no condition must there be an afternoon tea or snacks between meals. Alcohol drinks are allowed to the extent of two or three glasses of light wine at dinner, but beer is barred unless, indeed, the permitted carbo-hydrates be correspondingly restricted, though then the ale accepted as an equivalent must be extremely moderate in amount. The diet of a cured patient was something like the following: "For breakfast, a large cup of black tea, without milk or sugar, and two ounces of bread with plenty of butter, at half-past seven in winter, or at six or half past six in summer. For dinner, between two and three o'clock, soup often with marrow, four to six and a half ounces of roast or boiled meat, vegetables in moderation, but no potatoes, and almost no saccharine turnips. After dinner a little fresh fruit or a salad, or stewed fruit without sugar, with two or three glasses of light wine, followed by a large cup of black tea without milk or sugar. Supper of black tea, fat roast meat or eggs, or some ham, fish, a little

well-buttered bread, with cheese and fresh fruit formed the concluding meal, at the hour of seven or eight." Mr. Banting's rule was opposed to the best received physiological principles, and Dr. Ebstein's has yet to win the approval of the scientific world.

Dr. Koch, with the other members of the German Cholera Commission, have just returned after nearly nine months' absence in Egypt and India. Dr. Koch will shortly receive a professorship in the Berlin University.

The following extract is from the *Scots Magazine*, March, 1755: "There was presented to the Empress of Russia a laboring man who has had two wives, the first of whom brought him four times four children at a birth, seven times three, and ten times two. The second wife has lain-in seven times; the first time she brought forth three children, the other six times two. The whole number of children by the two wives amounts to seventy-two. G. O. M.

MISCELLANEOUS.

PIERRE, Hughes County, Dakota, May 21, 1884.

EDITOR OF THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION:

At a regular meeting of the Central Dakota Medical Society, held in Pierre, May 7, 8 and 9, the following preamble and resolutions in regard to the death of the eminent surgeon, Professor Samuel D. Gross, were adopted:

WHEREAS, During the session of the Central Dakota Medical Association, held in Pierre, May 7, 8 and 9, news reached us of the death of the eminent surgeon, Professor Samuel D. Gross, of Philadelphia, who has been at the head of the profession in America for the last half century, and whose numerous works on surgery are the leading text-books in Europe and America for both students and practitioners, and who has been one of our most faithful and earnest teachers for the last fifty years; therefore be it

Resolved, That we express most profound regret and sorrow for so great a loss to the profession, and the greatest sympathy for the bereaved family and the many personal friends who have been associated with him as teachers and students during his life-work.

Resolved, That a copy of these resolutions be furnished the JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION for publication.

A. J. DICKINSON, M.D., President.
N. S. SMITH, M.D., Secretary.

OFFICIAL NOTICE.

ANNUAL DUES from members of the Association—*Five Dollars* per annum—are payable directly to the Treasurer. Such payment entitles them to receive the JOURNAL of the Association for one year.

SUBSCRIPTIONS TO THE JOURNAL from those who are not members should be forwarded to the office of publication, Chicago.

BACK VOLUMES of the TRANSACTIONS may be procured, at reduced rates, by addressing the Treasurer.

THE INDEX to the 33 Volumes of Transactions will be forwarded, postpaid, on receipt of *One Dollar* by the Treasurer.

According to a resolution passed May 9, 1884, at the Washington meeting, continuous payment of Annual Dues is required, to retain permanent membership.

RICHARD J. DUNGLISON, M.D.,
Treasurer.
Lock Box 1274, Philadelphia, Pa.

NEW BOOKS.

Ziegler, Ernst. A Text-book of General Pathology, Anatomy and Pathogenesis; translated and edited for English students by Donald MacAlister. 12mo, 371 pp. New York: W. Wood & Co. (Wood's Library of Standard Medical Authors). Cloth, $1.25.

Fothergill, J. M. The Physiological Factor in Diagnosis; a work for Young Practitioners. 2d edit. 8vo, 240 pp. London: Bailliere. 7s. 6d.

Hetzman, C. Microscopical Morphology of the Animal Body in Health and Disease. Wilh 380 original engravings. 8vo, 850 pp. London: Trübner. 31s. 6d

Hutchinson, J. Illustrations of Clinical Surgery. Flasc. 16. London: Churchill. 6s. 6d.

James, J. B. Aids to Practical Physiology. 12mo, 60 pp. London: Bailliere. Sewed, 1s.

OFFICIAL LIST OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT UNITED STATES ARMY, FROM MAY 24, 1884, TO MAY 29, 1884.

Hall, Wm. A., Captain and Assistant Surgeon, assigned to duty at Fort Stockton, Texas. (Par. 1, S. O. 63, Headquarters Department of Texas, May 19, 1884.)

LIST OF CHANGES IN THE STATIONS OF MEDICAL OFFICERS, U. S. NAVY, FOR THE WEEK ENDING MAY 31, 1884.

Passed Assistant Surgeon F. Anderson, ordered to Navy Yard, New York.

Passed Assistant Surgeon H. G. Beyer, detached from Coast Survey Steamer "Blake," ordered to Smithsonian Institute for special duty.

Past Assistant Surgeon W. H. Rush, detached from U. S. S. "Despatch," and ordered to Coast Survey Steamer "Blake."

Past Assistant Surgeon L. G. Heneberger, detached from Navy Yard, New York, ordered to U. S. S. "Despatch."

Past Assistant Surgeon S. H. Griffiths, ordered to U. S. S. "Lancaster," on expiration of leave of absence.

Past Assistant Surgeon M. D. Jones, detached from Naval Hospital, New York, and resignation accepted—June 15, 1885.

Surgeon I. C. Wise, detached from Academy, and ordered to U. S. S. "Constellation."

OFFICERS OF

THE AMERICAN MEDICAL ASSOCIATION

AND OF ITS SEVERAL SECTIONS, 1884–5.

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Dr. C. H. A. Kleinschmidt, Washington, D. C.

Place of meeting, 1885, New Orleans, La.; Time of holding meeting, last Tuesday in April.

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ORIGINAL ARTICLES.

ADDRESS ON OPHTHALMOLOGY.

Presented to American Medical Association, May, 1884,

BY JULIAN J. CHISOLM, M.D., OF BALTIMORE, CHAIRMAN OF THE SECTION ON OPHTHALMOLOGY, OTOLOGY, AND LARYNGOLOGY.

GENTLEMEN:—Instead of formulating the advances made in ophthalmology, otology and laryngeal surgery for the Section over which I have the honor to preside, I have thought it best to take up as the subject of my address before the Association, the diagnosis and treatment of some of the most common diseases of the eye with which the profession at large cannot become too familiar. Within the last thirty years, the special study of the eye by physicians skilled in the general knowledge of medicine, made ophthalmology the pioneer in the work of specialties, and for many years it held exclusive sway in its isolated position. This conspicuous progress was made when good men in the profession, with a foundation of medical and surgical lore, concentrated all study and observation in working out obscure symptoms which time enabled them to classify, and by which a more comprehensive understanding of eye diseases was secured. It made the study and practice of eye surgery so very attractive, on account of its positiveness, that the good work which had been done stimulated pathological research in other directions, so that now the disturbances in the numerous organs which comprise the human body have become the absorbing subject of honorable investigation. The greatest excellence is naturally attained by the division of labor. As each part or organ of the human body is brought under the critical investigation of a corps of learned and experienced observers, who hasten to divulge to the professional world the wonderful discoveries which they make for the amelioration of suffering humanity, the entire subject of scientific and practical medicine makes conspicuous progress, which it could obtain in no other way. We must thank the specialist for the lofty position which general medicine has secured and for the progressive advances which each year's work in the aggregate develops.

It is very easy to appropriate what another has, by weary toil, discovered. The intelligent labor of many years of hard work can be condensed in a few printed pages, and the practical application can be summed up in a few, short, plain sentences. It is by the liberal distribution of these truths in medicine, worked out by the assiduous labor of specialists who restrict their observation, thought, reading and experience to the changes which disease produces in a single organ or in a very limited part of the living body, that the sufferings of the human race are to be alleviated, and that the length of life of a generation is to be prolonged. The general practitioner avails himself of the fruit matured through special work: and when he shows an aptitude to learn what must be useful in his every day practice, the family physician becomes truly the honored advocate of advanced medicine, and properly acquires the title to be considered the very head of the medical profession. It is from this standpoint that I bring before this large assembly of thinking men some of the truths with which a daily walk with those afflicted with eye and with ear diseases made me acquainted.

From an every day familiarity symptoms, not usually estimated in their true significance, become conspicuous for detecting diseases which otherwise would escape recognition. It is generally considered a very important factor in the successful treatment of a disease that its true nature should be detected in its very incipiency. For, although there are many diseases of the eye, which, like those of other and larger parts of the body, run their course uninfluenced by medication, there are on the contrary many which, when early seen, can be checked promptly, as the lighted match thrown on the floor can be put out by a stamp of the foot, if seen early enough and before the room is in a blaze. It is the early recognition, and the early application of judiciously selected remedies which gives the specialist the advantage over the general practitioner, who loses this opportunity, often to the serious and permanent detriment of his patient, because he was not alert in recognizing the disease for the control of which his services were required. The specialist knows often, but should only confess it to himself, that the lost eye for which he is consulted could have been saved if properly treated, and is often lost for the want of very little knowledge.

That one whose daily avocation brings him in contact with the varied disturbances of the whole organization should be as familiar with the practical details of changes which take place in a single organ of this intricate body of ours as the physician who devotes his time exclusively to one study, cannot be reasonably expected. The studious physician may read to satiety on all the branches of medicine, and be in

every respect what is properly called a well-read practitioner, but if he cannot apply his newly acquired knowledge for want of opportunity, the utility of his information will lose its acumen, and most probably will not be called up at will when needed.

The tendency of the day is to allow the specialist too much scope. The general practitioner abandons too readily most important fields for successful work which do not fall in, what he calls, his line of professional duty. Many of them confess at once that as to eye and ear diseases they know nothing. But should this be? Does this come up to the standard of conscientious duty to those who confide in their family physician for all things pertaining to the well-being of themselves and children? How often does it happen that a specialist is not at hand and it is impossible for the sufferer to seek one! Is the eye of so little value in the general utility that it should be lost because it unfortunately happens that the family physician has given no careful thought to the diseases of this very important organ? It was not so formerly: and with the flood of light which modern investigation has poured upon this special pathology, there is less excuse for it now.

There are certain duties which a general practitioner may delegate to those who by an everyday experience have acquired a skill in the manipulation of instruments which cannot be obtained from any amount of reading or thought. In eye surgery this is a recognized condition. Of two persons equally familiar with eye diseases and their treatment, the one who knows how to handle instruments the most skillfully will save the largest number of eyes. The casual use of eye instruments at long intervals does not give facility of manipulation, and therefore cannot secure for the patient the best promises of success. It is in this respect alone that the general practitioner should acknowledge the superiority of the specialist. In obscure cases he will also seek advice to aid him in defining the disease and in determining the proper course of treatment. But as to the ordinary diseases which affect the eye, ear or throat, and which are met with in the daily routine of practice, any physician ought to be thoroughly competent to treat them as skilfully as does the specialist, particularly as the requisite knowledge can be acquired with so little outlay of time and study.

I am sorry to say that there is a very dangerous self-confidence at times met with among medical men which would rather sacrifice the innocent patient than acknowledge any deficiency in medical preparation. There is also a class of physicians blindly ignorant, who are content to grope in darkness under the belief that special knowledge is beyond their attainment. Of both of these professional conditions the specialist in medicine sees a great deal too much. When an honest desire to acquire useful knowledge exists, the truths developed by the successful study of the specialties in medicine are within the grasp of any practitioner. Especially in relation to familiar eye and ear diseases there is now no excuse for ignorance. The literature of the profession is largely made up of the writings of specialists. Libraries can be filled with books on special medicine; and no medical journal published, however modest it may be, can avoid giving pages to the practical discoveries in eye, ear and throat surgery. Through these channels of cheap medical literature, within the reach of every one, the profession at large ought to be theoretically well instructed in the specialties. Many doctors can discuss learnedly the differential diagnosis of the everyday diseases of the eye, ear and throat, and yet my experience fully sustains me in saying that very few general practitioners are positive in their diagnosis of any of the diseases which affect these organs so essential to life and comfort.

Take the common diseases of the eye. Inflammation of the conjunctiva, iris and cornea, also the intra-ocular diseases affecting the lens, choroid, retina and optic nerve; troubles which the ophthalmoscope so positively reveals. To diagnose any of these diseases the general practitioner should be as apt as the specialist. *To know a cold in the eye when he sees it, and always to recognize it with certainty,* is easy work for the specialist, and should be knowledge ready for immediate use by any one who undertakes to treat the diseases of the eye at all; and yet I may venture the assertion, based upon a very large experience, that very few physicians have the necessary knowledge. I do not mean to say that their diagnosis would not be most frequently correct; but from the very confidence which all have that they certainly do know an injected conjunctiva when they see one, they call all such congestions of recent development cases of catarrhal ophthalmia, not remembering that iritis will often develop with conjunctival inflammation, sure to mislead those who are not always on the watch for this complication. What general practitioner is there who has not fallen into this error?

Whether the patient seeking relief has an incipient conjunctivitis or an iritis is often a very weighty matter. The consequences of an error in diagnosis may lead to the most direful results. It has reduced many a family from comfort to want, and where the head of the family is affected, may become even a question of bread for the wife and children. A cold in the eye, even if ignored, is often but a temporary inconvenience, which the powers of nature will throw off. An iritis, if not recognized, will lead to more or less permanent impairment of vision, and very often to the total loss of sight amidst much suffering. One of the most painful incidents of my past year's experience was when a physician in full practice brought to me for consultation his friend, also a physician, who was suffering from what was called a serious cold in the eye which would not yield to a solution of nitrate of silver applied assiduously three times a day. I recognized at a glance a case of plastic iritis. Every drop of the caustic application was exciting increased effusion, to say nothing of the intensity of the suffering which the treatment engendered. In this case the adhesions were allowed to become so free and firm that a strong atropia solution could not break them up, and therefore the eye was seriously and permanently injured by the error of diagnosis.

Every physician knows that inflammation of the iris has its peculiar symptoms, but, unfortunately, they are not as conspicuous as the congested vessels of the conjunctiva. The pink zone of ciliary vessels

directly around the border of the cornea is so much less red than the injected vessels of the conjunctiva, that it escapes general professional observation. The torpidity of the pupil, when exposed to various degrees of light, is not usually looked for by the family physician. Dullness of sight, which belongs to iritis and not to conjunctivitis, is ignored. The discoloration of the inflamed iris is looked upon as a freak of nature. Pain, which may or may not exist to a marked extent, is usually attributed to neuralgia. From the recognized symptoms the diagnosis of conjunctivitis is, therefore. most frequently made out, and astringents are prescribed, with the knowledge that a cold in the eye is properly treated with a solution of borax, zinc, or nitrate of silver. In the meantime inflammatory exudations are sticking together the border of the pupil and the capsule of the crystalline lens upon which the iris glides.

As such eye inflammations do not yield kindly or speedily to this kind of treatment, the idea may occur that something more than a cold in the eye exists. An experimental drop of an atropia solution is then applied, but it is now found that the pupil cannot dilate. This condition corrects the diagnosis, but too late to be of service to the patient's eye.

Every physician knows that a solution of the sulphate of atropia will dilate promptly a normal pupil. All equally know that inflammation of the iris interferes with dilatation, by causing adhesions between that portion of the iris and the capsule of the lens which are juxtaposed, also that such adhesions are among the early symptoms of iritis. When recent, these adhesions yield usually to the dilating influence of a 4 gr. solution of atropia. When long standing they cannot be broken up by any mydriatic eye-drop. It is also generally known to the profession that the future danger to the eye, after an attack of iritis, depends to a large extent on the number and firmness of these adhesions. The mistake of not recognizing sufficiently early iritic inflammations is made by physicians of undoubted skill, who deservedly occupy the very highest professional positions. Very few physicians escape this error in the course of their experience. A few will try to correct their diagnosis during the treatment, but will not succeed in removing the sequel of troubles which an earlier recognition would have prevented. The majority of physicians never see their error till pointed out by the specialist, to whom the case of impaired vision is finally brought for treatment. This mistake could never be made, were it not for the self-confidence with which the majority of the profession diagnose congestions of the eye-ball.

It would save much trouble and mortification if every physician who undertakes to treat the diseases of the eye would look upon a congested eye with suspicion, and make it a rule to instill a drop of a weak solution of atropia into every inflamed eye which he may meet with in practice. If the pupil dilates freely within a half hour, the iritic complication does not exist. In this way the diagnosis of cold in the eye can always be confirmed, and the safe treatment with weak astringent eye-drops can be instituted with surety. Should the pupil enlarge irregularly, or not at all, the diagnosis of iritic inflammation is equally clear, and stronger solutions of atropia must be frequently used or no successful results can be obtained.

While a few drops of an atropia solution may be put in all acutely congested eyes, to aid in establishing the diagnosis, which is so very important to the well-being of the patient, it is but very seldom that any harm will come from this application. Only in one disease alone can injury follow the use of the atropia drop, and that is in cases of inflammatory attacks of glaucoma with conjunctival complications. Such cases, however, are rare. They seldom occur in persons under 45 years of age, and most frequently in females. The condition is accompanied by severe pain in the face as well as in the eye, with rapid or sudden deterioration of vision. Most frequently, in such cases, the necessity for the atropia would not mislead, because the pupil is already larger than normal, and does not contract when exposed to strong light.

The next most common error in ocular diagnosis is when the disease called glaucoma, with its diffused severe head pains, is mistaken for trifacial neuralgia, and treated accordingly, to the final destruction of vision. Headache is such a common accompaniment of systemic disturbances that very few cases of acute disease exist without this symptom being present. Then comes the large list of purely neuralgic headaches, sometimes of the greatest severity and duration, occurring chiefly in females, and often defying the utmost efforts of the physician. It is under this guise of neuralgia of the temple, head and face that the terrible disease, acute glaucoma, attacks the eye. It is often accompanied with nausea, which stomach symptom again misleads. The agonizing pain in the forehead, temple and teeth constantly mask the pain in the eye, and the impairment of vision, with steady and often very rapid deterioration, does not attract at the time sufficient attention. The eye-ball is hard, and this so-called tension indicates at once that the serious trouble is, primarily, an eye disease with face symptoms; but the family physician is not accustomed to feel the eye-ball, and, therefore, does not recognize that the eye on the painful side of the face is more stone-like than the one not complained of.

Unfortunately glaucoma is a disease which medicine will not cure, and unless relieved by early operation its tendency is to permanent and complete blindness. Whenever a patient, usually a female over 45 years of age, complains of severe pain in the brow, temple, and teeth of one side of the face, most frequently also in the eye, especially when the vision on the painful side becomes suddenly defective, the attending physician should always suspect glaucoma, a destructive eye disease with conspicuous neuralgic complications. Patients with these symptoms are usually found in bed, and the entire armamentarium of anti-neuralgic remedies are tried in succession by the attentive family physician. Days, weeks, and months are often passed in fighting these pains. If the eye defect has been finally recognized, tonics are given to secure to the patient strength enough to visit a distant specialist. If instead of the repeated

use of the hypodermic syringe and the many doses of iron, quinine and morphia and all to no purpose, the physician has suspected the true source of all the trouble, by puncturing through the cornea near its temporal border with his lancet, he would have relieved the tension of the eye-ball promptly, the pains would have disappeared as if by magic and the patient would very soon have been convalescent. Nothing in the whole list of remedies relieves these frightful head pains so promptly and efficiently as free puncture. The moment the hardness of the eye-ball is relieved by removing some of the aqueous liquid the pain subsides.

Very seldom does a specialist see a case of glaucoma diagnosed as such by the family physician. Always the history given is that of facial neuralgia actively treated by anti-neuralgic remedies, and when a lull occurs in the symptom, which is one of the peculiarities of this eye disease, the impairment or loss of vision, as it may now be, attracts attention, often too late to secure any return of it. Terrible is it when one eye having been lost in this manner, the second eye becomes similarly attacked, when irrevocable blindness is the result of the faulty diagnosis. Glaucoma is possibly the most frightful disease which attacks the eye, and is the one the least amenable to therapeutical remedies; and yet its facial neuralgic complications which will not yield to quinine, morphine, leeching, etc., will disappear speedily when an iridectomy has been performed.

Another class of dangerous eye troubles, not fully appreciated by the family physician, are those produced by the accidental wounding of the eyes, and more especially by perforating wounds involving the ciliary regions, where the white and colored portions of the eye join. When sight has been lost by such an injury it is difficult for the unexperienced to appreciate the fact that it is dangerous to retain the lost eye on account of the risk of having sympathetic irritation excited in the remaining good eye. Sympathetic iritis is an incurable form of destructive disease excited by the presence of the injured eye. It cannot be too generally known and remembered that an eye lost from accident is too dangerous to be kept in the head. It can be of no possible use. Most frequently it looks badly, is often liable to attacks of suffering and is always dangerous in its tendency to extend destructive inflammation to the other. That persons have gone through a long life carrying with them a lost eye, which happened to give them no trouble, has deluded many into the belief that they may be equally successful.

If there was a fixed interval of time in which to look for the extension of sympathetic inflammation from the lost to the sound eye after which safety could be ensured, the patient could then be watched over this dangerous period. Unfortunately the time for sympathetic inflammation to be transmitted is at any period during the life of the individual who carries in his person the source of danger. In my personal experience I have seen the good eye destroyed from sympathetic iritis three weeks after the receipt of a perforating wound in the opposite eye. On the other hand I have had a patient who was not threatened with injury to the good eye until an eye lost in childhood by a scissor's puncture had remained quiescent for thirty-five years. At any time during this long interval an explosion of destructive inflammation might have occurred. Safety resides in the removal of the lost eye before the good eye takes on any trouble. This course alone can put the sight of the patient in a condition of absolute safety.

This fact, in the prognosis of eye injuries, is well-known to the profession, but like much that may be equally well-known, it is not recalled when most wanted for the protection of those who, confiding in their family physician, entrust their case into his professional hands.

The enucleation of the eye-ball is one of the simplest operations in eye surgery, which any physician could safely undertake. With scissors, forceps and blunt hooks, the conjunction can be divided around the corneal border, the recti-tendons can be found and severed, and by cutting the optic nerve and oblique tendons the eye-ball is isolated from the socket tissues. The only rule of procedure is to keep close to the eye-ball and remove it alone, leaving all other tissues in the socket. Should the unskillful operator allow the scissors to stray a little no very great injury will be inflicted.

To remove a destroyed eye is quite a simple operation when contrasted with the delicate manipulation necessary for restoring sight. These latter operations may require such a degree of skill in the handling of instruments and experience in guiding the knife so as to sever only the parts designed, as to restrict their successful performance to the hands of specialists. Even with these the largest percentage of cures usually follows in the wake of those who have had the largest experiences in operations. Every patient operated upon teaches the observing surgeon something, and adds to his facility in manipulation, and therefore to his success in the aggregate. For this nice surgery the aid of specialists must ever be sought, but for the treatment of the most common form of eye diseases, the physician should surely prepare himself, so that he will know how to detect without any question of failure in diagnosis, an iritis when he meets one, and a case of glaucoma, even if its trifacial neuralgic pains should tend to attract attention away from the primary eye disease. These cases are not as difficult to diagnose as chest or abdominal troubles, and are equally important for the well-being of the patient. As the general practitioner will without hesitation attempt to define the one, he should be prepared equally to determine the other.

The stethoscope is put into the hands of every physician, who is expected to use it correctly as an aid to diagnosis. The ophthalmoscope, an equally necessary instrument, should go along with it, so that the eye as well as the ear may be educated to aid in the detection of disease. The manipulation of the ophthalmoscope is so simple that, how to use it can be acquired in a very few easy lessons. A little practice will enable one to detect easily all the

grosser diseases of the interior of the eye-ball. After a very few days' instruction in the use of the ophthalmoscope, any physician will be able to say whether the lens is clear or cloudy, whether the choroid and retina are of normal appearance, or whether the optic nerve is in a healthy condition. A very little practice will enable one to explore the interior of the eye, so that by the aid of a few colored diagrams, found in most hand-books on eye diseases, he can determine in cases of imperfect vision whether he should investigate for local diseases or for general blood poisoning.

As one of the great aids to differential diagnosis, it would really appear as if this window of the pupil was especially opened, that we may be brought face to face with the innermost workings of the system in health and in disease. We can look into the open chambers of this living organ and see the blood circulating in the throbbing veins. Only here are the naked nerves exposed to view. By observation and analogy, we can determine how hidden parts of the body are influenced by diseased action. How the nerve tissue becomes suffused in neuritis. How inflammatory exudates look while going through their varied metamorphoses for increase, shrinkage or removal. How blood escapes from delicate blood-vessels, and the damage done by very limited extravasation in the substance of nerve-tissue. We can observe the changes which a thrombus produces in the territory supplied by any special vascular area. As these changes are seen to take place in the inner chambers of the eye, so may they be produced in the brain or in other organs not so favorably circumstanced for exploration.

In many a patient have I, by ophthalmoscopic examination, directed attention to the analysis of the urine, and the recognition of a well established case of Bright's disease, which up to that time had not been suspected. The changes which take place in the retina and choroid are often made available for establishing a correct diagnosis of brain diseases. Incipient changes in the spinal cord may exhibit the earliest symptoms of impending trouble in the appearance of the optic nerve, and the general poison, syphilis, will in the interior of the eye often show indubitably its destructive tendency.

To any observer desirous of investigating pathological changes, the eye is a mine of wealth and will repay one hundred fold for the little labor needful to prepare one to appreciate fully its wonderful revelations.

I have said enough to draw attention to the fact that through the special study of ophthalmology the classification of eye diseases and the value of symptoms have been clearly defined. There is now no excuse for errors in diagnosis of the common eye affections which every general practitioner must meet with from time to time in the routine of even a moderate practice. With a very little labor one can be thoroughly posted as to the disease and the most successful methods of treatment. If the case is one in which skilled manipulation is most likely to give the desired relief, then the physician should be in condition to appreciate fully the dangers to his patient and put the responsibility for a cure upon those of larger experience than himself; but all the ordinary cases of eye disease should be as safely treated by the family physician as by the specialist. Make it a rule to examine thoroughly every case of eye disease, especially those of an inflammatory nature. This is particularly needful in the purulent ophthalmia of newly born children. If a child less than a week old gets inflamed eyes, do not attribute it to a cold, to be indifferently cared for by the mother or nurse. Remember, that such inflammations a few days after birth are most frequently the result of inoculation from poisonous vaginal secretions, a purulent ophthalmia very destructive in its tendency, and to which is attributed very truthfully one-half of all blindness in children. A suppurative inflammation, which if neglected, will cause the cornea to slough and the eye to be destroyed, yet is an inflammation which when properly treated should leave no bad results whatever. When the eye of an infant is lost under the care of the family physician it can only be charged to professional neglect. Thorough cleanliness, the removal of all purulent secretions from the eye every half hour, day and night if needful, and the frequent use of a mild astringent of borax, grs.x to ʒ i, with the occasional use, once a day, of a solution of nitrate of silver, gr. v to ʒ i, should save the eyes of any little patient, when the disease is recognized before the cornea ulcerates and the eye becomes on that account permanently injured.

What the general practitioner most needs is not a detailed account of scientific researches, nor even the narration of the novelties in practice which the last year has developed. What is of the most value is a familiarity with well established facts of practical use for the recognition and cure of serious diseases. How to use remedies aright, is of the greatest importance. Take atropia, for instance, which is invaluable for the successful treatment of some of the most destructive inflammations of the eye, but it is far from being the universal panacea for every eye affection, as some professional gentlemen seem to think.

What I have said for the eye, I may equally duplicate for the diagnosis of ear diseases. Many of these to be sure are very obscure, and can with difficulty be reached even by the process of exclusion. Yet, hid away as this organ is in its labyrinthine portions, it can be as successfully studied as any of the other hidden organs of the body. We have, however, a portion of the ear under direct ocular exploration. The external ear, so-called, and the drum-head at the bottom of it, can certainly be as thoroughly studied as the skin in the palm of the hand. Everybody has heard of the drum, and every physician knows where the drum-head is to be looked for, but very few have ever seen it, to know its healthy from its diseased appearances. Many cannot recognize the drum-head at sight, or know whether they are looking at the skin lining the ear passage, or the drum-head at its extremity. They do not remember, when the knowledge is most needed, that the healthy drum membrane always exhibits a bright spot of reflected light at the lower end of the long process of the maleus, and that the sight of this, marks with certainty its exposure

upon inspection. Were this fact better known, cerumінous deposits concealing the membrane and causing deafness, would not be sent to specialists by good physicians, so that the former may secure great reputation in restoring hearing through means of a syringe and warm water. I have had patients travel from their homes and back again, from Texas to Baltimore, fully 3,000 miles, to go through this operation, because the family physician, a gentleman of very large experience and one well-read in his profession, was not sure of the appearances of a drum membrane, although thoroughly familiar with the book anatomy of the hearing organ. Make it a rule, without a single exception, to examine the external ear of every patient who complains of deafness, and not send them to a specialist until you are convinced that the disease lies beyond the drum-head. The general practitioner should be as skillful as the specialist to detect cerumінous deposits and to remove them.

I would urge upon the profession at large to appropriate to their own uses the simple truths which special medicine has made so easily understood. Make up your minds that as to the common diseases which attack the eye and the ear you will become as familiar with them as can be any specialist, and that hereafter no mistake shall be made in the differential diagnosis of conjunctivitis and iritis as long as a solution of atropia can be obtained. Be firm in the determination that if any credit or reputation is to be gained by the restoring of hearing through the removal of excretions in the external auditory passage, no specialist shall rob you, at least, of this award. In other words, make the peculiar knowledge of the specialist the common knowledge of the profession.

THE AMERICAN MEDICAL JOURNAL OF THE FUTURE AS INDICATED BY THE HISTORY OF AMERICAN MEDICAL JOURNALS IN THE PAST.

ADDRESS BEFORE THE AMERICAN ASSOCIATION OF MEDICAL EDITORS, WASHINGTON, MAY 5, 1884, BY LEARTUS CONNOR, A.M., M.D., PRESIDENT.

Published by Request of the Association.

The nineteenth century is full of achievements far surpassing the tales of the Arabian Nights. First among these is the printing press. In all directions it incites rapid thinking and vigorous action. All trades, all arts, all sciences, all professions, indeed all callings, have been driven onward and attracted forward by its powers. In fact this force so occupies all our time and all our energies, that we do not realize the spell under which we are moving. With annuals, quarterlies, monthlies, weeklies, tri-weeklies, bi-weeklies, dailies, morning, noon and evening, we find that even journalism taxes all our powers to keep pace with the ever onward rush of human events. Of the other work of the printing press we can gather but the most general notion. In medical journalism proper, there are but very few that can do more than keep track of the most notable events in certain lines of medical work. The medical journal is greatly influenced by the medical men among whom it circulates, and in turn largely influences both these and others. Unquestionably it is the greatest factor of modern medical progress.

It is in a very real sense a medical college, a post-graduate school, a preceptor, a host of text-books, new editions ever appearing, the old editions taking their honored place upon the library shelves. It is a medical society in that it permits constant conversation and discussion between all working, thinking practitioners of every age, language and degree of medical accomplishment. It encourages the most frequent meetings of all members of the great medical profession. In short, it is the great unifier of the past and present, the diffuser of all new facts, new thoughts, all new and better appliances for the study of the human body and for the relief of its derangements. It at once gives to all that which any one person has found helpful or useful in his fight with disease and death. It enables thus the profession to move onward as one man in the pursuit of its high calling. As medical journalists, it is worth our while to occasionally consider the history of this mighty power, if perchance it may help us in our endeavors to so shape activities as to gain the highest good possible under existing circumstances. Such is my object at the present time. I desire to present some facts relating to the history of medical journalism in America in the hope that they may suggest lines of more useful endeavor in the future.

For many of my facts I am indebted to the courtesy of Dr. J. S. Billings, the able chief of the library of the Surgeon General's office, U. S. A. Portions of this data appeared in the Boston *Medical Journal* Jan. 2, 1879, and the *American Journal of Medical Science* for 1876. The rest has been gathered from files of medical journals since accumulating in the Library of the Surgeon General, and such other sources as were accessible to me. I do not flatter myself that I have collected all the medical journals of the United States, but I have obtained all that I could, and think that but few have escaped my attention.

The first medical journal[1] published according to Dr. Billings was issued at Paris in 1679. It was edited by Nicholas de Blegny, who seems to have been "a good bit of a charlatan." This journal was translated into both Latin and German. In the United States the first medical journal printed was the translation and selection from the "*Journal de Medicine Militare*," issued in Paris from 1782 to 1788. It was published in New York about 1790.

The first American medical journal was "*The*

[1] "Les Nouvelles Découvertes sur toutes les parties de la Médecine. Recueillies en Annie 1679, par N. D. B., 12 mo. Paris 1679." Continued the following year as "Le Temple d'Esculape." In 1681 it appeared as "Journal des Nouvelles Découvertes, Concernant les Sciences et les Arts qui font partie de la Médecine" 12 mo, 631. Dr. J. S. Billings.

Medical Repository," a quarterly edited by S. L. Mitchell, Edward Miller and E. H. Smith, New York, 1797–1824. Of the twenty-three volumes of this journal, Dr. Billings says "they are well worthy of a place in the library of the physician of to-day." From that day to this New York has never lacked one or more medical journals.

The second American medical journal was the *Philadelphia Medical Museum*, edited by Dr. Coxe from 1804–1811. Baltimore gave us the third medical journal, the *Baltimore Medical and Physical Recorder*, edited by Dr. Tobias Watkins, 1808–9. The first medical journal of Boston was the *New England Journal of Medicine and Surgery*, 1812–27. It began as a quarterly, and in 1828 was consolidated with *The Boston Medical Intelligencer*, forming a weekly, *The Boston Medical and Surgical Journal*, which has continued to the present time.

The *American Journal of Medical Sciences* began as the *Philadelphia Journal of the Medical and Physical Sciences* in 1830. It is said to have been started by Dr. N. Chapman under the stimulus of the phrase of Sidney Smith, "Who reads an American Book?" A new series began in 1825, which continued till 1827, when Dr. Isaac Hays took charge and gave it its present name. Since then its editorship has continued in the hands of Dr. Hays and his son. Throughout its entire history it has exerted a wide and lasting influence for good upon the best medical thought and work. Its contributors and its readers have long included the very best minds of the English speaking medical profession. It would be hard to find a medical scholar who would confess that he did not read the *American Journal of Medical Sciences*. West of the Alleghanies the first medical journal was the *Western Quarterly Reporter of Medical and Surgical and Natural Science*, 1822–23, Cincinnati, O.

The *Transylvania Journal of Medicine* was the first Kentucky medical journal published in Lexington, 1828–39. West of the Mississippi the first journal was the *St. Louis Medical and Surgical Journal*, 1843 to the present.

In the south the first medical journal was published at New Orleans, 1831, the *Journal de la Societe Medicale de la Nouvelle Orleans*. The most important journal was the *New Orleans Medical and Surgical Journal*, which was continued from 1844 to the present. The oldest existing medical journal of California is the *Pacific Medical Journal*, 1858 to the present.

From these beginnings have come a multitude of medical journals of all sizes, shapes, and prices, animated with very diverse aims, and edited and published with as diverse ability and care. Altogether the entire number of titles of medical journals started previous to February, 1884, is 509. Of these 136 are now current. 373 have passed over to the silent land. The accompanying table† gives the beginnings and endings of these journals in periods of four years, except the last period, which includes six years. It will be observed by this table that periods of great commercial depression are marked by a diminution in the number of journals started. Thus, from 1812 to 1816 but one journal is started, while in the four previous years there had been six, and during the four following years there were seven. The same remark applies to other periods of similar commercial disaster. Since the recovery from the panic of 1873, the multiplication of medical journals has been unprecedented. Thus, from 1878 to February, 1884, we have 173 started. The mortality was also terrible, being 106. It seems from these facts evident that the number of new medical journals bears a definite relationship to the general prosperity of the country.

† [illegible]

YEARS, BOTH INCLUSIVE.	REGULAR.		HOMŒOPATHIC.		BOTANIC.		ECLECTIC.		ALL MED. JOUR'S.	
	BEGUN.	CLOSED.	BEGUN.	CLOSED.	BEGUN.	CLOSED.	BEGUN.	CLOSED.	BEGUN.	CLOSED.
1797–1802	2	5							2	5
1803–1807	2								2	
1808–1812	6								6	
1813–1817	1								1	
1818–1822	7	2							7	2
1823–1827	13	14							13	14
1828–1832	11	14							12	14
1833–1837	12	10	3	2	1	2	1		20	12
1838–1842	17	14	10	1	7	6			27	14
1843–1847	21	5	5	5	6	6	4	2	36	18
1848–1852	21	7	4	5	3	2	4	8	36	18
1853–1857	27	27	5	10	1	2	5	4	31	48
1858–1862	32	35	6	5	1	3	5	6	42	45
1863–1867	18	15	13	4	1	1	6	3	36	22
1868–1872	31	22	6	7			11	6	43	35
1873–1877	30	24	8	9					49	40
1878–1884										
Total...	378	234	66	48	19	19	46	35	509	373

To the total number of medical journals ceased as given above, must be added thirty-seven. These could not be given in the table as the data did not permit me to separate the regular from the irregular. The summary will then stand thus:

			Feb.
378 Regular	begun	1797–	1884
56 Homœopathic	"	"	"
19 Botanic	"	"	"
46 Eclectic	"	"	"
509 Total.			
234 Regular	ceased	1797–	1884
48 Homœopathic	"	"	"
19 Botanic	"	"	"
35 Eclectic	"	"	"
37 Some of each	"	"	" 1879
373 Total	"	1797–	1884
135 Current			

It is also apparent that of all medical journals started but few are long lived. Most die young, some very young, as the following table* shows. Thus taking the period commencing Jan., 1879, and ending Feb., 1884, there were commenced titles of 129 regular medical journals. Of these, five issued

but one number, twenty-five did not complete the first volume, thirty-seven did not go beyond the first volume, forty-seven did not go beyond the second volume, while but eighty were current at the end of the period. The same remark holds true of the irregular medical journals. Or taking all medical journals, of all kinds, since the settling of the country and we have a total of 509 titles started. Of these twenty-six did not issue more than one number, seventy-three did not complete the first volume, 161 did not go beyond one volume, 105 did not go beyond two volumes:

*

Mortality Statistics of Medical Journals from 1879 to Feb., 1884, of those started during this period.

	No. Titles Commenced.	Only one No. Issued.	Vol. I. not Compl'ed.	No. that did not go Beyond one Vol.	No. that did not go Beyond two Vols.	Current, Feb., 1884.	Total Ceased.
Regular	129	5	25	37	47	80	49
Homœopathic	13	0	2	2	2	6	7
Eclectic	4	0	0	0	0	3	1
Chemistry and Pharmacy	13	0	1	2	2	5	8
Dental	12	1	1	1	1	9	3
Veterinary Medicine	2				1	0	2
Total	173	6	29	42	53	103	70

Perhaps the first thought of one interested in medical journalism on the learning of these facts, is, why are so many journals so short lived? The answer to this query is not so simple as it seems. It calls for an analysis of the motives that induce men to start and maintain medical journals. If the object be accomplished by one number, surely it were Utopian to expect the journal to continue longer. If the experience obtained during the issue of a journal for one year has sufficed to convince its projectors that their end could not be reached in this manner, it is plain why the journal should be discontinued. Or, if it should be proved by an experience of two years that the attainment of the end sought by the publication of a medical journal is more costly as to money, time, friends, etc., than the end would be worth, then surely the journal must stop. As will appear, many of the motives influencing the starting of medical journals are of this temporary sort, and hence the journals are correspondingly short lived.

The study of the medical journals of the United States, as arranged by States, is of considerable interest. In the accompanying table* they are so arranged, giving also the total number started in each State, the number now current, and the number that has ceased.

We find that thirty-one States and Territories are represented by medical journals. Of these, New York produces the largest number, viz., 125; Pennsylvania follows with 63, barely more than half; next is Ohio, with 49; then Illinois, with 29; Missouri, with 24; Massachusetts, with 22; Kentucky and Michigan, with 21 each; Maryland, with 18; Louisiana, with 17; Virginia, with 15; Tennessee and Georgia, with 14 each; Indiana, 13; California, 10; Texas, 6; South Carolina, Kansas, Iowa, and District of Columbia, 5 each; Arkansas, Maine, and Minnesota, 3 each; North Carolina and Oregon, 2 each; West Virginia, Vermont, and New Hampshire, but 1 each.

* TOTAL NUMBER OF MEDICAL JOURNALS OF THE UNITED STATES, ARRANGED BY STATES.

	Total.	Current.	Ceased.
Arkansas	3	0	3
California	10	4	6
Colorado	4	1	3
Connecticut	4	2	2
District of Columbia	5	0	5
Georgia	14	5	9
Illinois	29	9	20
Indiana	13	5	8
Iowa	5	1	4
Kansas	5	2	3
Kentucky	21	3	18
Louisiana	17	2	15
Maine	3	1	2
Maryland	18	3	15
Massachusetts	22	6	16
Michigan	21	8	13
Minnesota	3	2	1
Missouri	24	7	17
New Hampshire	1	0	1
New Jersey	4	1	3
New York	125	41	84
North Carolina	2	1	1
Ohio	49	6	43
Oregon	2	0	2
Pennsylvania	63	15	47
South Carolina	5	0	5
Tennessee	14	4	10
Texas	6	2	4
Vermont	1	0	1
Virginia	15	4	11
West Virginia	1	0	1
Total 31 States	509	136	373

Even a casual glance at these facts shows that the greatest number of medical journals has sprung up in those States having the largest amount of trade. In order, these are New York, Pennsylvania, Ohio, Illinois, Missouri, and Massachusetts. Here we find the great cities of commerce—New York, Brooklyn, Albany, Buffalo, Philadelphia, Cincinnati, Chicago, St. Louis, and Boston. In a smaller way other commercial centres have produced their share of medical journals.

It is plain that where men are gathered for large and extensive commercial ends, there will be found the largest number and most important medical journals. The philosophy of this is not at all intricate. It is here that the largest financial, social, scientific and professional rewards are to be had for the highest practical knowledge and skill. As men go to these places for rare and choice merchandise, so they go there for the most expensive and celebrated medical and surgical aid. Hence men best able to meet these demands are attracted to these places. To still further exercise their powers, and to reach and attract a larger clientage, these write much for the benefit of their professional brethren. These writings call for medical journals by which they may be widely scattered. If needful, either they establish medical journals or cause their establishment. According to their wisdom in making their foundations temporary or permanent, so is the life of the journals long or short.

Competition between the profession of these commercial centres is so sharp, that only those of exceptional advantages as to capital of money, culture, brains or social position can hope to win. None ever reaches a great supremacy over all his competitors, so the struggle never ends, but continues till the powers are exhausted or death ends the scene. Large expense of living calls for large returns from work done. These returns are best secured from difficult or dangerous cases. To obtain many of these it is needful that the powers of individual doctors be made known to the profession. Hence the necessity of medical journals to carry a knowledge of these powers to the rank and file of the profession. 'Tis not uncommon for doctors to figure up the direct financial return from the publication or an article describing a new operation, etc. Where the financial pressure is greatest there will be the greatest inducement to relieve that pressure by such labor as has a money value. Where professional competition is sharpest for the securing of difficult cases there will be the greatest demand for medical journals which reach the greatest number of physicians scattered over the largest extent of country and readily accessible by lines of travel.

The same conditions are a stimulus to the physician who delights to overcome difficulties for the satisfaction of being conqueror. In a smaller degree every smaller centre for publishing medical journals feels the influence of the same principles of human activity. No doubt other agencies are at work in all places, and peculiar ones in particular towns, but these in no wise conflict with the ones mentioned. Nor do they at all controvert the fact that the permanent home of the best medical journals is in the political and commercial centres of the United States.

As to the character of the medical journals the accompanying table is of interest.[1] This shows that from Jan., 1879, to Feb., 1884, inclusive, medical journals were started in twenty-five states. In each one of the twenty-five, one or more regular journals were started. In six States Homœopathic journals were started, and in four Eclectic. The States starting Homœopathic journals are Illinois, Michigan, Missouri, New York, Pennsylvania and Texas. One Eclectic journal was begun in each of the following States, viz., Georgia, Indiana, Massachusetts and New York. Illinois began four Homœopathic journals, New York three, Michigan and Missouri each two, Pennsylvania and Texas each one. From this it would appear that the States in which Homœopathic and Eclectic journalism has been the most active during the past six years are Georgia, Illinois, Indiana, Massachusets, Michigan, Missouri, New York, Pennsylvania, and Texas. It will be noticed that these States are of great commercial importance and activity. Judging by this alone it would seem as if the influence of commercial centres tended to the development and propagation of "Isms." Is it true that the pressure brought to bear upon the profession in such centres turns the brains of many to the popular "Isms?" Certain it is that the facts point to this conclusion. Historically the great cities of the past have been the centres of the first development of those departures from truth and virtue which have ruined prosperous empires, carrying down scientific medicine and the liberal arts. Are we to expect that the influence of the medical journalism of the great commercial centres is to permeate the entire mass of the profession in other States? Certainly, if the same causes continue to operate. Will they continue to operate? It remains for the profession to determine this. If illegally educated doctors by the thousand are yearly turned loose in the ranks of the profession until competition becomes so sharp that few can make a fair living by honest logical methods of procedure, then such journals will rise all over the land, even more abundantly than in the States in which they now exist. At least they will do so until some new "Ism" enters the field to tickle popular fancy and open up another way of making a living. Bearing upon this question is the fact exhibited by the careers of the Botanic medical journals. Nineteen of these have started and nineteen have died. The period of their rise and fall is included between 1828 and 1862. All there was of good in them was absorbed by the medical profession and the rest so shrunk that there was no call for a distinctive representation among the medical journals.

In the earliest development of medical journals it appears that they bore a close relation to medical colleges. The publication by the colleges of the theses of their students, permitted the professors to make a statement before each thesis not to exceed sixteen pages. This gave professors a chance to publish some of their writings, as the subject-matter of their prefaces was not required to correspond with the subject of the thesis. But other doctors had no such means of reaching the profession, as usually the professors preferred to occupy all the space themselves. Hence the doctors were compelled to publish their own articles at their own expense. Later, as the medical journal became more definitely formed, it was mostly in the hands of college men. But in

[1] Medical Journals in the U. S. started from Jan. 1879 to Feb. 1884, arranged by States and character of Journals.

	Regular.	Homœop'thic.	Eclectic.	Dental.	Chem & Phar.	Veterinary Medicine.	Total Twenty-Five States.
Arkansas	2	.....	.....	.....	.....	.....	.....
California	2	.....	.....	1	.....	.....	.....
Connecticut	1	.....	.....	.....	.....	.....	.....
Colorado	4	.....	.....	.....	.....	.....	.....
District of Columbia	2	.....	.....	.....	.....	.....	.....
Georgia	2	.....	1	2	.....	.....	.....
Illinois	8	4	.....	.....	1	.....	.....
Indiana	6	.....	1	.....	.....	.....	.....
Iowa	2	.....	.....	.....	.....	.....	.....
Kansas	2	.....	.....	.....	.....	.....	.....
Kentucky	1	.....	.....	.....	.....	.....	....
Louisiana	1	.....	.....	.....	.....	.....	.....
Maine	1	.....	.....	.....	.....	.....	.....
Maryland	1	.....	.....	.....	1	.....	.....
Massachusetts	7	.....	1	1	.....	.....	.....
Michigan	7	2	.....	.....	.....	.....	.....
Minnesota	2	.....	.....	.....	.....	.....	.....
Missouri	7	2	.....	2	.....	.....	.....
New Jersey	2	.....	.....	.....	.....	.....	.....
New York	39	3	1	2	8	2	.....
Ohio	7	.....	.....	1	1	.....	.....
Pennsylvania	16	1	.....	2	2	.....	.....
Texas	3	1	....	.....	.....	.....	.....
Tennessee	2	.....	.....	1	.....	.....	.....
Virginia	2	.....	.....	.....	.....	.....	....
Total Twenty-five States.	129	13	4	12	13	2	173

Excluding the Journals on Chemistry and Pharmacy—on Dentistry and Veterinary Medicine, the total of Medical Journals started was 146.

the lapse of time the pressing duties and other engagements of the professors became such that medical journals little by little fell into the hands of outsiders. At the present time only the newer and less stable medical colleges possess an organ in the shape of a medical journal.

Medical societies have also exerted a large influence in developing medical journals. Just how large this influence has been is difficult to determine. Indirectly it has operated in this direction by awakening a desire on the part of individuals to learn the views of particular men as presented in medical society gatherings. This desire called for the publication of the records of the meetings in the form of transactions. Usually if the society be large and have but yearly meetings, a single volume is issued at periods of a year. The permanent additions to our medical literature by these volumes have been large. Still all that is of real value to the reading medical public is now given to the profession months before the appearance of the volumes of transactions. Hence these volumes have come to be the repositories of details and elaborate articles, as such can find no place in the general medical journals.

Meantime, some societies have adopted the methods of the medical journal in the publication of their transactions. Perhaps the most successful of these journals is that published by the British Medical Association. Edited with great ability it has gradually won for itself and the organization it represents, the admiration and respect of the thousands who weekly reads its pages. The process by which this brilliant result was reached was a slow one, but it has demonstrated that it is possible for a large medical society to successfully organize and conduct a medical journal.

THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION is now passing through the first stages of a similar development under less favorable circumstances. Like its English brother, it has already been subjected to sharp criticism, it has had to meet the envy, jealousy, and disappointed ambition of disappointed persons and localities, but we have no doubt that in the end it will surmount all these obstacles, and have a future even more brilliant than its English brother.

Brooklyn, N. Y., has for several years given us two excellent society medical journals, the "*Proceedings of the Kings County Medical Society*," and the "*Annals of the Anatomical Society*." Unfortunately, both have suspended publication for the present. But however it may be that some medical societies may successfully conduct medical journals, it still remains true that the problem of medical journalism of the future does not admit of its best solution in this manner. The organizations are too unstable for the maintenance of permanent medical journals.

In examining for the causes which have led to the rapid and widespread multiplication of medical journals, we find them as numerous as the several classes of journals started.

One class, and that a large one, owes its existence to the desire of some person or persons to start a medical college, or to advance its supposed interests. It would perhaps be easy for individuals in each State to name the journals started for this purpose. But generally the purpose of these journals is so evident that all must recognize it. There are two ways by which these journals operate. The first and most creditable way is for the managers of the journals to incite a scientific and literary activity among all the persons interested in the proposed or existing medical college. The publication of excellent material in a journal emanating from any particular city directs the attention of the readers of the journal to this city, to these men, to this journal and this college. So long as this work is honestly done and the conduct of the journal creditable in all other respects, it is regarded with good-will by even such as differ from it in its ultimate aims. Unquestionably a large amount of scientific and literary work has been done under this stimulus which otherwise would have remained undone. On the whole, we think that such journals have earned the substantial regard of the profession.

But, especially in the past, a portion of these journals have operated in quite a different manner. They have devoted time and energy to the making of representations respecting themselves more creditable than the truth would warrant, and in attacking the persons and reputation of their rivals, real or supposed. The work of these journals makes a sorry spectacle to the medical student of past journalism. In this sort of journalism, personalities of the most bitter nature were often exhibited. Fortunately, the progress of events has removed most of these excrescences of medical journalism, and we may indulge the hope that they may never reappear.

Another class of medical journals sprang from the desire of some person to attack his real or supposed enemies without restraint. Perhaps the most noted example of this class is that of the "*Rush Light*," published in New York in 1800 by William Corbett, under the pseudonym of Peter Porcupine, for the villification of Dr. Benjamin Rush. Only seven numbers were published and only two bore the imprint of the place of publication. The last two were printed in London.

Another class of medical journals came from the desire of some person or persons to extend their reputation in certain lines of practice. This desire has given us many very excellent journals which we could ill afford to lose. They have gleaned the best the world has to give in knowledge or skill in certain lines of work and presented it to the profession in a compact readable form. The special disadvantage of these publications is that they are unstable. Generally they are discontinued as soon as their projector has established sufficient reputation and practice so that he can accomplish his wishes without this additional labor and expense. In so far as we have known they are usually published at a pecuniary loss to the individuals publishing them. The reason for this lies in the fact that their circulation is small and their expense great.

Within the past few years, manufacturers of drugs and chemicals, etc., have become the owners of medical journals, with the view of bringing their

products more clearly to the notice of the profession. For years they have practically supported medical journals by the money they have paid for their advertisements. In this manner they have practically controlled, in so far as they desired, the utterances of a considerable portion of medical journals upon subjects in which they had a special interest. Hence it was but a step to run a journal wholly in their own interests. Some excellent medical journals are now conducted on this basis. It does not appear that they are more subservient to the manufacturers' desires than those journals who carry large advertisements for the same manufacturers. Besides, most of the manufacturers have been shrewd enough to see that if they reached the ear and pockets of the profession, they must do it by obtaining and keeping their confidence. To obtain this confidence has been a difficult task, but that it can be done "The Ephemeris" of Dr. Squibb is abundant proof. Of course the danger of this class of medical journals lies in the possibility that the powerful influence of the capitalist may end in bending the journals to their present interests irrespective of the real facts and future profit. But this will doubtless correct itself, in that it will soon appear that any course other than a strictly fair and honest one will at last be suicidal both to the journal and the manufacturer.

Another class of medical journals has grown up in connection with the publication of medical books. Firms having large numbers of medical books to sell have found it to their advantage to publish medical journals. In this manner they have better been able to place their books before the individual physician. As a rule, these have been the best of medical journals. It would not be profitable to attempt to sell a good book by the publication of a low grade medical journal. As the value of the best medical books becomes more apparent, so will this class of medical publications come to the front. This class draws its contributions from a wide source and contains very much of the best material published. Large capital sustains them and large financial interests depend upon the excellence of their management. Hence it is reasonable to look to these for the best medical journals of the future.

A distinct profession of medical editors has not as yet been developed. Few even gain their living by acting as both editors and publishers. Some possibly live entirely by their editorial work, but their number is extremely small. A number get some pay in money for their work, but most get nothing. Not a few pay considerable sums for the chance of acting as editors. Most get simply the books and journals received in exchange. Hence as a rule medical editors get their living by the practice of medicine, their editorial duties being performed in the intervals of their regular daily work. Unquestionably medical journals as a whole suffer from this condition of things, but the remedy for it is not yet apparent. When medical colleges shall be able to pay each teacher, so that he can devote his entire life to study and teaching, then perhaps medical journals will be able to pay their editors sufficient to enable them to devote their entire energies to the conduct of their respective medical journals. As the day for the former seems far distant, so that of the latter is not near at hand.

The influence and power of medical journals depend largely upon their subscription lists. It is a difficult subject upon which to collect reliable data; still, it is certain that the paying subscription lists of most medical journals is small. A few issue from 1,000 to several thousand copies of each number to paying individual subscribers. But more issue less than 1,000, and not an inconsiderable number less than 500. Of course larger editions are issued, but several hundreds are sent to book-publishers, advertisers, exchanges, and deadheads. The reason why it is so difficult to get accurate information in regard to exact circulation, is that upon this circulation, real or unreal, is based the estimated value of the advertising pages. To confess a small circulation, would at once discourage advertisers from paying so large a price as is asked for the advertising columns. Still, the advertising value of a medical journal cannot be accurately estimated from even the exact number of copies mailed to paying subscribers. Much depends upon the persons who read the journal, and the confidence they repose in its statements. Shrewd advertisers recognize this fact, and upon it base their estimate of the relative value of advertisements in different medical journals. The roar of a lion will arouse more attention in a given community than the bleating of a lamb.

The history of the past ninety years shows that the number of medical journals with large subscription lists is constantly increasing. While none are able to maintain a continued prosperity without advertisements, it is to be expected that advertisements will have a decreasing influence upon the utterances of the editorial pages. A large subscription list is the only condition of escape from all bondage in this respect. Being wholly free from any bondage to the advertising pages, these pages would still remain both a source of increased income to the journal and of instruction to all its readers, in matters pertaining to the preparations produced by the arts of chemistry and pharmacy. But it has always seemed to us that in the pages of the real medical journal of the highest class, no advertisements of preparations would find a place which the reader of the journal might not prescribe with the feeling that he was doing that which would encourage both medical and pharmaceutical art.

The prices of medical journals have presented a curious spectacle, one worthy of careful study. Just now medical journalism is passing through an epidemic of cheap medical journals. I do not use the word "cheap" simply in the money sense, but in every sense—cheap in price, from $1 to nothing, and even paying the purchaser for taking them; cheap in make-up, in paper, in press-work, cheap in editorial work, and cheap in contributed articles. These journals have had a large patronage, by appealing to that thrift which eagerly seeks to get things for less than their actual value, and by that self-complacency which makes its owner believe that through this slight expenditure of money, and effort to read and brains

to understand, he can keep fully posted as to the changes taking place in the medical world. Farther, this style of medical journalism has led to the propagation of much nonsense respecting the calls of the "busy practitioner" for brief articles. This call for brief articles has just this truth in it, which saves it from being an unmitigated falsehood, viz.: The shortest space in which thought and facts can be clearly and forcibly set forth, is just the space each article should occupy. Many excellent articles do occupy far more space. But, on the other hand, a large proportion of the so-called brief articles contain absolutely nothing worthy the attention of any studious medical man. Then, the busiest men in the profession are those who not only find time to read all the long articles in all the medical journals which have a bearing upon their studies and practice, but they also find time to write long articles for medical societies and medical journals, and even to write our very best medical books. The "cant" of those who "boom" the cheap medical literature is harmful to all concerned, unless it is discounted at its actual value. It is a settled principle that in trade men usually get only that for which they pay. They may be deceived and get less, but not more. Hence, it may be understood by every intelligent physician that when he subscribes for a 50-cent journal he will get 50 cents' worth, just as when he subscribes for a $5 journal he will get $5 worth. Occasionally, it is true, that far more than the subscription value is given by a medical journal, because the proprietor has quite other ends to attain than the simple publishing of a journal for the returns by subscriptions. An illustration of this is seen in the *Ephemeris*, by Dr. Squibb. It is sent to those who wish it, for nothing. His object is simply to advertise his goods, by educating physicians as to their exact nature and peculiar virtues. Other excellent journals are published in a similar manner. The publishers get their pay for their publications by the sale of their goods. These are, however, exceptions, and so serve to prove the rule as old as the world and based upon commercial principles. We regard this epidemic of cheap medical literature as short-lived, and as a needful preliminary to the further development of the best sort of medical journalism. It is making a demonstration of an unfruitful field of medical journal labor. A cheap medical journal may be a good thing for the waste-basket, but it is not a product to which its owner will in the future point with pride, as it stands upon his library shelves. Its existence will serve to induce the publishers of the best sort of medical journals to furnish their products at as low a price as is consistent with excellence of work. It also shows the folly of attempting to cover even a small field of medical science regularly for 50 cents a year, more or less by a few cents.

Such are some of the facts relating to the growth of American medical journals. In truth these journals will compare favorably with the medical journals of any country. We have some good as the best, we have many poor, but it does not appear that we have the poorest. Many have been stranded by the progress of events, their history remaining to teach us the mistakes of their founders and conductors. Considering the crudities by which all such enterprises are surrounded at their beginning in a new country, it is surprising that the United States has made so good a record. As a whole our medical journals have advocated the right and labored for what they regarded as professional advancement. If they are to be compared with their allies in making and moulding medical thought and progress, medical colleges and medical societies, we think that medical journals have no occasion to be downcast. But comparison is unprofitable. Each has done its part more or less imperfectly but still so as to gain the general commendation of all real workers for medical progress. But what of the future? Does the past ninety years of medical journalism give any hint as to the medical journalism of the future? In a general way, yes; as to details, no.

In a general way, judging from the facts presented and suggested, we venture to suggest some general principles along which the medical journals must move.

1. A great many different persons having diverse aims will endeavor to originate and conduct medical journals. Of these the fittest will survive, those who can teach best through medical journals, the largest number of practitioners and investigators. In this manner the best available talent for editorial work will find its fitting field. A medical editor like a poet is born and not made. Only by the fullest liberty can he find his fitting work.

2. The largest and most influential medical journals will develop in the great commercial centres. Those of less power in the lesser cities. All these will at last so be established that it will become a matter of such difficulty to start new journals at every new cross-road, that few will care to undertake the task.

3. With increase of wealth and power the great medical journals will be able to pay their editors such salaries that they can afford to devote all their time and energies to the conduct of their several journals. This will result in the formation of a profession of medical journalists. As reporters, as correspondents, as editorial writers, etc., a corps of many workers will be found under each editor. Those exhibiting greatest fitness for editorial work will in turn take their places at the head of medical journals. Thus will medical journalists attain their highest teaching power, and an influence unsurpassed by any class of instructors in the profession.

4. The medical journals of the future will more and more be separated from medical colleges, medical societies, and all other corporate bodies that in any way cripple their perfect independence to work, and think, and speak for the great masses of the medical profession. This separation will be an indication that the best days of medical journalism are approaching, and that the conductors of these journals have recognized the elements of best success in medical journalism. Being thus perfectly independent of any particular body of men or special interests, medical journals will be able to speak for all interests in so far as they tend to the common good

and to condemn all that are opposed to the common good.

5. The advertising columns of the medical journal of the future will have less and less influence over the utterances of the editorial pages. One of the sad things of past medical journalism is the prostitution of the reading pages to the supposed interests of the advertising columns. Secular journals have sinned in this respect, but medical journals cannot be called spotless. But the future medical journal of greatest power for good in the profession, will show itself without stain even in every advertising page, as well as reading matter proper.

6. The advertising columns of the best medical journal of the future will contain a notice of nothing which shall not be free to every pharmacist to manufacture, as free as the formulas of the pharmacopœia. This will exclude all proprietary and copyrighted medicines of every sort. It will serve to encourage skillful and learned pharmacists to work with and for the medical profession directly, and so stimulate the best growth of the science and art of chemistry, pharmacy and medicine. Each respecting the rights of all other workers, will contribute their utmost to the advancement of common interests. If reduced to their proper number and supported by the medical profession as a whole, the medical journals could afford to take this step in the direction of freedom in all that pertains to the materials of the medical art.

7. The medical journals of the future will be able to pay more and more for the contributions to their pages as well as to their editors. This will encourage every struggling practitioner to make the most of all the material at his disposal. It will also place the editor in such a position that he can refuse all articles that have not decidedly positive merit in them. In this manner a vast amount of worthless trash will be prevented from cumbering the libraries of the future. Money compensation for all work done on a medical journal will sift the good from the poor, and obtain the very best the profession can produce with a minimum of the worst.

8. How shall we reach this end? It strikes me that it will be best to let experience do most of the teaching. The past shows that it is impossible to persuade a man that he is unfit to run a medical journal, until he has convinced himself by trying. The more who try, the more will there be of the class who know themselves unfit for medical editorship. Colleges have largely learned already that a college "organ" does not pay. Hence they have largely dropped this method of advancing the interests of their schools. Others who start medical journals to build up special interests will ultimately find that these interests would have been better served by not starting a journal. Naturally they will drop it.

Then as the conviction grows in the profession, that eminence and power in the profession must be earned by honest hard work, so will there be less inducement for the starting of numerous medical periodicals.

Beyond a doubt, years of prosperity will in the future as in the past be attended by a large crop of new medical journals, and years of depression by a small crop. But out of it all shall surely rise the medical journals of the future—journals in all true senses independent of all influences not tending to the uplifting of the medical profession to the highest position attainable for it—journals that in pure English shall represent the finest scholarship of the century—the truest manhood, the honesty and courage to speak the truth as occasion shall call for it without favor or fear of any college, advertiser, or clique of men of any sort—journals that shall not only fully and fairly represent the past and present condition of medical science and art, but shall inspire enthusiasm in all their readers to struggle for the best attainments possible in the future.

103 Cass St., Detroit, Mich.

PHTHISIS—ITS SUCCESSFUL TREATMENT.

BY J. P. MILLER, M.D., BUCKHANNON, W. VA.

Read in the Section of Practice of Medicine and Materia Medica, May, 1884.

At this, the noon of micro-organific light, it would be a breach of order in medical authorship to touch the intra-thorax without a temerarious parade of one's knowledge of the *bacillus tuberculosis*. But in these halcyon days of elaborate reviews, retrospects, weekly couriers, records, bulletins, and budgets, almost universally distributed to members of the profession through the advertising and enterprising ingenuity of medical publishers, few, if any, of us could come here other than replete with knowledge and opinion of this much-discussed organism.

To dispel the incubus of your apprehensions I shall begin by promising not to subject you to the tedium of a bacteriologist. Though not assuming such proportions, I shall not avoid a casual notice of this "idea of the season."

When Koch, the great apostle of bacterian pathology, made known the results of his investigation in Berlin a few years ago, in less than forty-eight hours the contents of his paper were telegraphed to the world, the important part of which, and that which defined his position, said: "The active agent in the causation and propagation of tuberculosis is a distinct species of bacterium—a bacillus. Tuberculosis does not occur without the presence of these organisms, and conversely, no disease should be regarded tuberculosis * * * without the presence and vital activity of this bacillus."

Out of 150 tubercular specimens at various stages of development, Spina *did not find bacilli in one*.

Dr. H. B. Formad,[1] with the view of proving or disproving the position of Koch, utilized tubercular material from the autopsy table of over 400 cases, the result of which was the conclusion on his part that tuberculosis is not a contagious disease.

In the nature of things it involves so many ques-

[1] Journal American Medical Association, Feb. 9, 1884.

tions of actual scientific research that your opinions would probably be little aided, if at all, by any position which I might now assume. I avow my belief, however, that Koch's discovery will not assist us in either remedying the disease when it comes before us, or diminishing the frequency of its occurrence. His theory of contagiousness is already waning. Upon the threshold of the decadence of its lustre we stand much advanced, and in the full light of science which has doubtless attained to the ultima thule of the bacillus tuberculosis. But I must avoid posing here, taking counsel of the opportune suggestion of the Chairman of this Section in our last meeting, that one can now illy afford to shine with borrowed light. I shall offer facts of which I have the best verification—the evidence of my own senses.

In pulmonary consumption we recognize a malady at once the saddest and most important of all somatic diseases. It chooses its victims chiefly among those who are marked as "superior men and women," because of their bright intellects and often high culture, carrying away fully one-third of all who die in middle life. The prevailing belief with the populace is that a person affected with phthisis is surely doomed, whether speedily or slowly, to an uninterrupted progress to death. This shadowy belief is sustained by a very large majority of practicing physicians, some of whom denounce with vehemence any and all who claim to remedy this disease, as being charlatans.

Having for ten years done an extensive practice in a climate remarkable for its excessive humidity and its variable, very rapid and extreme thermal changes, respiratory diseases have been no small factor in the total sum of diseases I have been called upon to treat. During winter and spring thirty-five to fifty degrees Fahrenheit rise or fall in twenty-four hours is not uncommon, and I remember a rise from 10° below zero at morning's dawn to 54° above at 3 o'clock P. M., or sixty-four degrees in nine hours. Though 1,600 feet above tidewater, this extraordinary climate has been peculiarly favorable in affording large opportunities to the rural practitioner for clinically studying phthisis in its many phases, forms, peculiarities, and complications.

By reason of my success in its treatment during the last five years, I am prepared to place myself in opposition to the common belief that it is an irremediable disease. I shall not enter upon a disquisition of its history, pathology, etiology, or semeiology, but will confine myself chiefly to the treatment of its various stages and complications.

There lurks in the memory of all of us a nebulous notion that phthisis is refined into a certain number of distinct types. Furbish up our knowledge of these anatomo-pathological refinements as we may, we are liable to fail, clinically, to determine the presence or absence of tubercle.

In the so-called caseous phthisis or *phthisis florida*, pyrexia is the more conspicuous symptom, ranging from 104°-106°. The stomach will seldom bear our most potent antipyretics. Dr. Bartholow, to whom I sent a patient with this disease four years ago, advised me to give quinine grs. xx, in ten-grain doses night and morning with digitalis grains j-ij, three to four days each week, but the intestinal irritability and nausea which followed made me chary of its use—indeed, since the death of that patient I have not regained courage to try it again. I have tried every known antipyretic. Salicylate of sodium will more often than any other be found serviceable.

The type of fever should be carefully studied: Is it in its usual form, quotidian; if so, simple or double? Let salicylate of sodium grs. xvi-xxiv, and where there is gastric or intestinal irritability, or diarrhœa, morphia gr. ¼-½ combined with each dose, be given during remission and one hour before exacerbation. If this does not hold fever in check give two doses; three hours and one hour before thermal rise. The stomach may bear this from one to three weeks.

Anorexia, as a concomitant of phthisis, is the rule, its absence the exception; especially in fibroid and tubercular phthisis during incipiency is this a prominent symptom. Here I permit small doses, about a tablespoonful, of whiskey with a bitter, as wild-cherry bark or nux vomica, with each meal, but I never fail to impress my patient with the fact that whiskey is not antidotal to pulmonic degeneration.

The *Liver*, in phthisis as in pneumonia, is congested, and jaundice, more or less decided, may be present. This condition is conspicuous in those addicted to the use of alcoholics, and those tainted with malarial infection. An accompanying gastro-duodenal catarrh may so derange digestion as to necessitate the constant use of stomachics, and in the early stage laxatives. Dextro-quinine is antidotal to malaria and at the same time a laxative and antipyretic. Its adaptability here is patent. But before long it usually proves irritant to the stomach and bowels, when it may be given alternate days or weeks with hydrastis in such doses as the stomach will bear, and enough to produce one and two actions on the bowels daily.

Our more unfortunate patient—disciple of Bacchus—dare not now if he choose and can, break the habit of years however detrimental to the lungs, but a gradual diminution of quantity is to be enjoined. Stomachics, laxatives, and tonics may be combined with his "bitters," and if degeneration can be arrested and the lungs restored, the use of alcoholics of all kinds must be interdicted.

Nausea and vomiting are often coupled with lack of appetite, emaciating the patient to an alarming extent. This is doubly unfortunate, as food and remedial measures are alike rejected and ejected by such stomachs. These valetudinarian stomachs are a very "Safe" against therapeutics, of which I do not profess to carry the "combination." It is difficult to conceive of a condition more embarrassing to our skill, and burdensome to our powers. However, I do not banish my patient to despair. The doctor here may take latitude in caprice with the stomach and try almost everything. I usually begin with:

℞ Acid carbolici..... 3i.
Tincturæ iodi..... 3ij.
M. S., gtts. iij in water before food.

Or,

℞ Strychnia ..... gr.i.
Acidum nitrohydrochloricum dilutum ..... ℥ss.
M. S., gtts. v–viij in water before food.

Again, Fowler's solution may be given in small doses, not to exceed three drops, in water before eating. Three to six drops of deodorized tincture of opium added to each dose of Fowler's solution when there is diarrhœa is very efficient. Sinapisms over the pit of stomach before eating are necessary in very obstinate cases until digestion is established, which will be aided by giving pepsin after eating. The potency of pepsin is increased by giving nitrohydrochloric acid before meals.

Having subdued pyrexia, allayed nausea, and overcome anorexia, an enormous leverage has been obtained for direct methods of remedial treatment of the lungs. If caseous or tubercular formations have invaded the alveoli or parenchyma of the lungs, do we possess means to procure softening, absorption and extrusion? In attesting to the affirmative of this question I shall do so only so far as my own clinical observation warrants. The best knowledge for practice is what a man gets for himself. In medical or surgical practice, it is said, the results obtained from any means or methods of treatment are proper tests by which their value may be judged.

Qualified by the precision of this formula, the article of first value is Yerba Santa. I administer it in the form of fluid extract in half to teaspoonful doses three times a day, just before or after food.

As intelligent men, scientific and enlightened practitioners, you will demand the rationalé of its action. This I cannot give, for the resulting benefits are empiric facts which you must take on trust. I am unadvised of its chemical parts, nor have I learned of its physiological action. I have not even heard it extolled by any medical writer or teacher, but I have used it in no small number of cases during the last four years and its remarkable effects, even in typically bad cases, induced me to prepare a clinical record of some of these as a part of this paper, but its technical limit suggests the omission of the prosy narration of cases, than which nothing can be more dreary.

In puissance, as a solvent of tubercular and caseous deposits in the lungs, Yerba Santa has no equal in our materia medica. It is a laxative, and in the early stage of phthisis while there is gastro-hepatic torpor, duodenal cattarrh, with accompanying irregularity or inaction of bowels, Yerba Santa is all that is required, and yet its mildness of action does not prevent its use in more advanced cases when the bowels are moderately lax. Diarrhœa must, of course, first be checked.

I have repeatedly observed in cases of pyrexial phthisis, where every conceivable antipyretic means failed to make an impression, the free and continuous use of Yerba Santa bring a temperature of 105½° to 99½° in less than a week, and while under its influence not rise above 102°. The patient complained of sweating too freely all that time.

It is known that night sweats do lower temperature, and until the subsidence of pyrexia they should not be stopped by the usual means; as continuous diapedesis will surely and permanently bring down fever. Yerba Santa will produce such perspiration during waking hours that your patient will soon tell you that he no longer has those cold night sweats. When the temperature is normal, or sub-normal, and owing to loss of power of the vaso-motor system, the patient has night sweats, picrotoxine, or atropia and strychnia, will be efficient and proper.

As all our efforts of medication and alimentation are recuperative, we would naturally cast about for some counter-irritant that is not depleting—not a vesicant. This ensnaring plausibility is purely speculative, as heavy perplexity and embarrassed satisfaction have long ago taught me. I have for some years used cantharidal unguents to most thorough vesication over entire area of diseased lung or lungs, and I have never had to do other than congratulate myself upon the immediate advantage. There is no time here for following the vagaries of theory or of therapeutists. Blisters and every relay of blisters will cause you to exult over your pluck. The more abiding its issue the more marked is its good effect, and when we find phthisis the sequel of pneumonia, more especially of pleuro-pneumonia, or interstitial pneumonia where the inflammation of pleura and interlobular connective tissue is largely increased, the invading disorganization and degeneration are modified, if not arrested, by this potent means.

During incipiency, before the thermal rise is great, and again when it is waning, the absolescence of the exudate will be greatly facilitated by the use of iodide of iron and cod liver oil. The best way of administering this is with Trommer's extract of malt. Additionally, this is the most admirable constitutional support of which we know for those cases, and has a well known advantage in those tainted with scrofula. The stomach must be made tolerant of its use by beginning with very small doses, a half teaspoonful or less, gradually increased to a teaspoonful, never to exceed a dessertspoonful, just at the beginning of each meal.

When the alveoli are being invaded by an extension of catarrh of the bronchi, as the sequel of rubeola, scarlatina, pertussis, or a succession of deep colds, I like the effects of the iodide and carbonate of ammonia, and give it in pleasant form.

℞ Ammonii Iodidum..... ℥j.
Ammonii Carbonas..... ℥iss.
Syrupi Tolutanus.
Aquæ .....ãã ℥ij. M.

Signa: A teaspoonful every four hours.

This form is more usually accompanied with a harassing cough, granular pharyngitis, burning in throat and fauces often compared by the patient to a "coal of fire." Insufflation of sulphur is often good. I prefer boracic acid in fine powder and bicarbonate of soda equal parts. The best instrument for this purpose, so far as I know, is Trodd's Powder Blower, manufactured by Sharp & Smith, Chicago. I order the powder to be blown into the pharynx as often as pain is experienced, even if every half-hour. Iodoform ℥j., sulph. æther, ℥j M., in very obstinate cases may

be necessary; of this, two drops thrown in the pharynx twice a day in addition to the above will be found beneficial. Expectoration, when profuse, is usually acrid, producing erosion of upper larynx, and pharynx. Atropia, gr. j–℥j in one and two drop doses every six hours, will be highly serviceable here.

I shall now speak of one or two types of phthisis which offer almost nothing but discouragement, and do so without going into the intricacies of semiology. Miliary tubercles, when scattered even in very large quantities throughout the lung substance, give rise to no symptoms by which their presence might be recognized or even suspected so long as they remain isolated. The wily artifice of death here bespeaks a very entity of intelligence, moulding and fixing, cautiously isolated with covert hand, a calculated abundance of these nodes, as torpedoes, to fatally shatter its victim in the explosion of coalescence which must before long follow.

This class we will usually see at, or shortly after, pubescence. They are sallow, anæmic, of a decidedly phthisical dyscrasia, which the history of the case discovers to us as the stamp of patrimony, by Bartholow facetiously designated as "gelatinous children of albuminous parents." The bravest of us, graced with an array of successfully treated cases on our list, must lack courage when brought before one of these. The lung change, when once discovered, is active, temperature-course remarkably fitful, morning depression may be 96; evening exacerbation 104.

Lastly, I wish to call your attention to a form of phthisis on which our books are silent. It is a slow form of phthisis peculiar to women unbraced by chronic uterine ailment. The buoyancy so characteristic of consumption is wanting here, and we find our patient in the slough of despond. Though her whims are pampered, and her slightest caprices anticipated, she may be irritable or melancholy over imagined neglect or supposed tire of those in whose affection she is nearest. Subjective symptoms are vague and mostly phenomenal, the slightest of which is brooded upon and nursed into an unwholesome importance, requiring as great æsthetic skill to right her psychical wrong, as medical knowledge to treat her physical ill. We have no complication of phthisis, which we may reasonably hope to benefit, that will ever and under all circumstances so perplex us when we come to treatment.

Having no data except that of my own experience, which until quite recently had nothing to encourage, and is still not ripe in assurance, I mean at present to merely call attention to this condition, and if with farther observation of my present method of treatment, its success warrants, I may again address this Section.

Finally: Being called upon for help by a subject of phthisis, we should be fully alive to the fact that he is closely besieged by Death; and beyond the immediate redoubt of therapeutics we must reconnoiter and sentinel, with sleepless vigilance, the environment. Undue anxiety of friends, superstitions of neighbors, the allurements of the advertising charlatan, the wily and wise nihilists, in and out of the profession, bring influences to bear upon our patient that operate as a Gatling against us, and we may be vanquished.

Time, and other observers, may reverse the verdict, but I cannot help feeling that, these adverse influences successfully guarded against, conjoined with the remedies and methods herein recommended, boldly, skillfully, and persistently applied, will prove the means for the fine achievement of curing a high per cent. of that form of thoracic degeneration which has hitherto baffled our science, and is a standing opprobrium to our profession.

Buckhannon, W. Va., April 23, 1884.

MEDICAL PROGRESS.

ANATOMY AND PHYSIOLOGY.

MOVEMENTS OF THE BRAIN.—M. Béclard at a recent meeting of the Paris Academy of Medicine replied at length to the statements of M. Luys respecting the movements of the brain, to the effect that the question itself was an old one, and that certain very restricted movements were noticeable after trephining the skull, and that polygraphic tamtors have registered these movements in unison with those of respiration and circulation. What is thus seen after trephining in the dog is also seen by watching the fontanelles in the infant. In the adult these phenomena also exist. Slight movements are rendered possible by the presence of the subarachnoid fluid and the elastic tissues. The brain with its envelopes fill completely the cranial cavity, the dura mater acting as the periosteum. There is no empty space in these visceral cavities. To detach the brain from the superior wall of the cranium requires a force equivalent to a column of mercury 76 centimeters high and two decimeters square at its base, that is to say, more than 200 kilogrammes. He had examined with care the illustrations given by M. Luys, whose arguments were not based upon any experiments applicable to man. On the contrary, there were experiments made upon animals, which are absolutely demonstrative and contradict the conclusions of M. Luys. It is now over 30 years since they were first made. Among them he cited those of M. Salatĕ who showed the movements of the brain under the influence of the circulation and the respiration, and its immobility in whatever position the cranium was given.

SURGERY.

ON THE OPERATIVE TREATMENT OF HEPATITIS AND HEPATIC ABSCESS.—Dr. Patrick Manson in the *Medical Reports of the Chinese Imperial Maritime Customs*, uses in abscess of the liver a drainage-tube of stout rubber 8 or 10 inches long, with a bore of at least one-quarter of an inch, about 3 inches of one end of which is perforated with large holes like an ordinary drainage-tube, its outside circumference is considerably greater than that of the canula through

which it is to be introduced. After puncturing the abscess, withdrawing the trocar, and the matter ceases to flow in full stream, the rubber tube, mounted on a steel stylet provided with a silver cap loosely fitted to the end of the stylet, is passed through the canula until the cap is felt to impinge upon the posterior wall of the abscess. While one hand gently but firmly holds the stylet and tube in position, the other carefully and slowly withdraws the canula from the side of the patient, the fingers gaining the requisite purchase for the very considerable pull and half-rotating movement required, from the eyes of the canula. The tube has been kept on the stretch by a string tied to the eye of the stylet, this is now cut—the tube is held tightly grasped by the tissues, and its perforated end lies in the abscess sac—the elasticity of the rubber causes it to resile towards the fixed abscess end, and, expanding, firmly to block the wound in both liver and abdominal wall. The peritonæum is thus bridged across, and pus flows freely through the tube without any risk of escape by the side. The stylet is then withdrawn. The operation is performed with all antiseptic precautions and the dressings are made upon the same principles, the end of the drainage-tube is inserted into a silver tube two inches long, which has carbolized gauze and a stout macintosh attached to it, all of which is secured by two broad flannel rollers, one thoracic and one abdominal, the drain lying between. To the silver tube is attached six feet of rubber tubing five-eighths of an inch bore, already filled with carbolic acid solution kept from running out by clips, and with its free end placed in a wide-mouthed bottle of a capacity of about two ounces and firmly secured—this small bottle is placed in a large bottle containing carbolic solution. The syphon is now complete, and the abscess contents are discharged as soon as formed, by the tube and into the bottle. A fall of about 18 inches is usually sufficient to insure a steady drain. The object of the small bottle is to prevent the entrance of air into the tube when the larger bottle is emptied of discharge from time to time. As no discharge can pass by the side of the drainage-tube, there can be no soiling of the dressings, consequently the patient need not be disturbed to have these changed for a week at least, or as long as discharge readily escapes by the syphon. The advantages claimed for this operation are: 1. The ease with which it is performed. 2. Skilled assistance is not necessary. 3. It is absolutely bloodless—no small advantage where a patient by long illness is reduced almost to the last extremity. 4. It is applicable to both very deep and superficial abscesses. 5. By means of the syphon action of the drainage-tube, the most dependent part of the abscess is as thoroughly drained as the highest. This important point is not met in the operation by incision, where bagging of pus is as a rule inevitable. 6. Antiseptics are easily and efficiently used. 7. In the operation by incision or puncture, the dressings must be frequently changed, especially during the first few days after operating; in this operation a week may safely elapse without its being necessary to disturb the patient to dress him. This means an enormous saving in suffering and risk to the patient, and in trouble to the surgeon. 8. Liver pus is often so thick and viscid that it will hardly, unaided, flow through an ordinary drainage-tube, and when it does get through, being forced out by accumulation in the abscess cavity, it coagulates into a sort of jelly and is not absorbed like ordinary pus by gauze dressings. It tends to collect in a mass round the end of the drainage-tube, effectually plugging this and preventing free discharge. This peculiarity of some kinds of liver pus is very remarkable, and is a great obstacle to successful treatment. But by the methods of dressing recommended, this viscid coagulating pus is removed as soon as formed, and no blocking or obstruction occurs—the abscess is always empty. 9. In the operation by incision the patient lies in soiled dressings, and is in consequence uncomfortable and perhaps restless; by the syphon-drain this is entirely obviated. 10. In this operation there is no danger to be apprehended from escape of pus into the peritonæum, and it is therefore a matter of indifference whether adhesions have formed or not. The canula, and afterwards the tube, are so thoroughly grasped by the tissues that leakage is impossible; and before the tube has become slack, adhesions are likely to form between the peritoneal surfaces of the liver and abdominal wall. Besides, the abscess being always kept empty there is no pus to escape at the side of the tube; and, as a matter of experience, even when the tube has been weeks in position, not a drop of liver pus has ever soiled the dressings. 11. It is manifest that an elastic tube is superior to the rigid silver canula that is sometimes used. The latter must tear the liver tissue in the up and down movements of respiration; this is a very extensive motion, as one can easily see by watching the motion of the aspirator-needle when its point is buried in the liver.

Objections that may be raised to this operation are:—

1. The elasticity of the tissues may be so great as to compress the rubber tube and block it. This Dr. Manson has not found to occur. 2. As the ribs come together in empyema, or in liver abscess opened through an intercostal space, they will compress the tube. Once for a day or two in one case this seemed to happen, but the obstruction was never complete, and very soon the edges of the ribs, where the tube pressed in them, apparently became absorbed, just as bone is under the elastic pressure of an aneurism. 3. The difficulty of keeping the dressing in position. This undoubtedly is considerable, but can be met by care and contrivance. If insuperable, the ordinary dressing may be adopted and the syphon discarded. 4. The necessity for special apparatus. Manson has performed the operation with an ordinary large trocar and canula, an ordinary large sized drainage-tube, and the stylet of a No. 12 gum-elastic catheter.

Dr. Manson regards puncture with the aspirator as a valuable therapeutic agent in hepatitis, where abscess has not yet formed—he has never seen any bad results from its use in such cases, and is satisfied that it has averted the formation of abscess.

One of the cases cited by him is of peculiar inter-

est, as it presents the rare condition of a complete biliary fistula existing under observation for about two months. In this case after relief from hepatic abscess by this operation, the patient gained in strength and weight, his temperature was normal, the pulse 100 per minute. Two semi-solid stools, entirely devoid of bile, were passed every morning with the utmost regularity; sometimes the action of the bowels was preceded by colicky pains, but there was no diarrhœa. Food of the ordinary character, with a plentiful allowance of milk was freely consumed. Two hours after eating, 5 grains of inspissated ox-gall, made up into a pill, was taken three times a day. From the tables given the inference may be drawn—first, that the average secretion of bile in a man weighing about 100 pounds, eating heartily of ordinary food and taking no exercise, is over 28 ounces in the 24 hours; second, that the rate of secretion is very irregular, and has no apparent relation to the hours of eating; third, that in the case cited the escape of bile was in some measure vicarous of the urinary secretion.

MATERIA MEDICA AND THERAPEUTICS.

THE HYGIENIC TREATMENT OF ALBUMINURIA. — Senator (*Berl. Klin. Wochenschr.*); (*Jour. de Med.*), in considering the degree of albumen in the urine as the index to the character and severity of renal disease, regards its presence not objectionable from the amount of loss to the system which it represents so much as that it is *the* diagnostic symptom of importance. This being generally recognized the presence of albumen is important from another standpoint, if we admit that perhaps in many of such cases the albuminoid matters act as irritants to the parenchyma of the kidney itself. We know that egg albumen, when introduced into the blood, is eliminated through the kidneys, and, what is most interesting, that the amount of albumen discharged exceeds the amount injected; so that it is not only the egg albumen which passes out with the urine, but also the albumen of the blood-serum—thereby determining the excretion of a new quantity of albumen. It is not improbable that the peptones act like the egg albumen, and it is possible that the albumen excreted in Bright's Disease is so altered as to act like a poison upon the kidney.

The general uselessness of drugs in chronic nephritis, and the often spontaneous relief to acute nephritis, with the variations for better and for worse which occur in chronic nephritis independent of all medication, and the benefits of a rational hygienic treatment, give to the latter a considerable degree of importance. The first question here, then, is upon diet, in which two things are to be considered: the quantity and the quality of nourishment.

As to the *quantity*. The latest researches have shown that albumen in the urine increases during digestion, in those in whom it is constantly present, and that it reappears where it had apparently disappeared. Even in healthy persons we may note its presence after a copious repast. The patient, then, must avoid abundant repasts; he may eat often, but little at a time.

As to the *quality*. From what has been said Senator interdicts positively the use of eggs. Cheese and meat come under the same ban, and for the same reasons. Lichtheim adds another inconvenience which results from an alimentation rich in nitrogenous matters, viz.: the accumulation of urea in the blood with its consequences (uræmia). Recognizing their importance as food to many, Senator considers it necessary to *moderate* the use of meat and cheese, and to confine the diet to flesh which contains comparatively little nitrogen, as veal, young chicken, fish, etc. On the other hand, he recommends the free use of a vegetable alimentation, especially those vegetables which are poorest in albuminoid matters, such as the greens, salads, fruits, etc.; regulating the diet, of course, as far as possible, to the preferences of the patient and the condition of the digestive organs. The fats may be allowed in certain quantity if well tolerated.

As to *drinks*, it has been the custom to interdict empirically the use of alcoholic drinks. Senator is of the opinion, that we should not always interdict their use, particularly with those habituated to them. We may deny the use of brandy, etc., but allow the use of red wine (claret). He has seen beer increase the quantity of albumen, but has never observed a case where claret influenced the presence of albumen in the urinary secretion. Spiced and smoked meats are objectionable.

As to the *milk cure*, which has been so justly appreciated for a long time, it is not a question of an exclusive milk diet, for such a regime would not be tolerated for many days—it requires to be absorbed in too great quantity—two liters of milk would not contain enough of the albuminoid substances to nourish a man who passes his time in inaction. To assist this Senator gives with the milk a small quantity of white bread, or perhaps a little soup.

Of *mineral waters*, the saline and alkalino-saline waters as drinks are the best, and may be either hot or cold as the case may be. We do not know what the action is. One would suppose that these salts would irritate the kidney rather than benefit it, but experience proves the contrary—perhaps they act by assisting the digestive functions and modifying the decomposition of the blood. Employed as baths they have also an undeniable influence upon assimilation and disassimilation, thereby acting perhaps favorably in albuminuria; but their action on the skin is of the first importance—however it may be explained, it is an established fact that if a patient loses much water by the skin, the absolute quantity of albumen diminishes in the urine; its relative quantity, it is true, is greater, but that is accounted for by the diminution in the quantity of water. Therefore it is well to keep the skin in a constant state of more or less active transpiration—warm baths; flannel next to the skin; keeping to the bed for weeks or even months, and suppressing as much as possible, *muscular movements*. Observation has shown that muscular movements increase the quantity of albumen. The same may be

said of moral emotions. Menstruation regularly increases the quantity of albumen, so that we must be particularly careful to observe prescribed rules at such periods.

Finally, to produce the best results an appropriate climate must be selected by choosing the dry regions of the South, where the beneficial influence is exerted upon the skin, with muscular and intellectual repose, and with a vegetable diet.

Musk.—Dr. D. J. Macgowan (*Chinese Customs Medical Reports*) records two cases illustrating the beneficial use of the Chinese musk-plaster with four grains added. The first was a case of severe lumbago, in a rheumatic patient, and of ten days' standing, which had been treated in the usual way without relief. The application of the plaster was followed by sleep in two hours, the next morning the pain was barely perceptible, and in three days it wholly disappeared. The second was a sprained ankle with extensive tumefaction and intolerable pain; the application was made eleven hours after the injury. Ten hours later the patient fell asleep and in the morning the joint was painful only upon pressure. On the fifth day walking was partially renewed, and in a few days more the only trace of the injury was a stiffness of the joint, which continued much longer.

Dr. Macgowan gives an account of the Chinese mode of obtaining musk from the musk-deer and civet-cat; and tells us that this valuable substance no sooner leaves the hunter's hand than skilful manipulators adulterate the article for wholesale dealers, who adulterate it for the trade, when it is found to possess about 10 per cent. of genuine musk.

MEDICINE.

A Contribution to the History of Syphilis.—Dr. B. Schenhe, of Leipzig, refers (*Chinese Customs Medical Reports*) to a work of Japanese origin, and drawn up in the year 808, by two of the private physicians to the then reigning emperor, as an annotation and collection of all that was extant relating to the national art of medicine. It unfortunately remained unknown, and it was only at the beginning of this century that it was for the first time printed. In 1827 a certain Bude found a well-preserved manuscript in a temple, and published it. Since then it has been several times re-issued. It is composed in the ancient language of Japan, but it is transliterated into Chinese characters. Two chapters relate to syphilis. We see bubo, chancre, œdema preputii, phagedenic chancre, exanthemata, bone and joint affections, ulceration of the throat, and severe tertiary symptoms briefly indicated in their order, and finally otorrhœa added, though this, indeed, is here not so thoroughly in its place.

The inter-dependence of all these affections was known to the authors; they already, therefore, considered syphilis as a specific disease. It is not possible to say whether they hold that it is contagious, and especially whether they believe it to be communicable by sexual intercourse; for the doctrines of Chino-Japanese medicine attribute other diseases which are not contagious to the operation of special poisons.

A Case of Anuria Persisting for Fifteen Days Without Injurious Effects.—Dr. L. Chappot de la Chanomé, in *Le Concours Medical*, cites a case occurring in a man aged 66 years, who complained of pains in the lumbar region, general discomfort, and loss of appetite. There was no fever, and the tongue was natural. He prescribed a saline purgative, and friction over the painful region. The next day the patient declared that he had not passed urine for three days, but that it did not trouble him, as he felt no desire to do so. Palpation showed that the bladder was empty, or nearly so; but to make sure, he introduced a catheter, without producing a single drop of urine. He prescribed energetic diuretics, but without result. Six days later he called Dr. Bonin, of Monchamp, in consultation, and catheterism was again practiced, without effect. The prognosis naturally was very grave. The patient kept to his bed, had no fever, but a strong dislike to food and a decided relative weakness. He talked freely with those around him, and complained somewhat of lumbar pains. Diuretics and sudorifics were freely used, strychnia was given, the lumbar region was blistered, and warm baths were administered. Every day there was a moderate amount of perspiration, of an odor like that which is found in some cases of rheumatism, and each day there were two or three stools of the character of an ordinary diarrhœa. Finally, on the fifteenth day of the anuria the patient felt for the first time a pressing desire to urinate, and he hardly emptied his bladder before the desire returned, and the urinal was filled more than once. This continued for the first twenty-four hours. The second and third days found the amount diminished, but much more considerable than under ordinary circumstances. After that the secretion became normal, the health of the patient was rapidly re-established, and the patient has been perfectly well ever since (eighteen months).

Prizes.—The Illinois State Medical Society, at its recent annual meeting, offered a prize of $100, for the best Essay on Diphtheria; and another of $100, for the best Tabulated Statement of ten cases of any important disease occurring in the practice of the writer. The awards are to be made by a committee of three appointed by the President of the Society, and to be done in time to have the papers presented at the next annual meeting of the Society.

Baby-Farming and Mortality.—At a Sanitarium or semi-charitable establishment near Hammonton, New Jersey, for the reception and care of foundlings, twenty-five infants were received since January 15, 1884, of whom twenty-three are dead. So extraordinary a mortality has attracted attention, and the coroner is investigating the institution and its surroundings. The mortality in all establishments for the reception and care of foundlings, is and must be large, unless healthy wet-nurses can be provided for the unfortunate infants; and too much care cannot be given to the management of such institutions when they are permitted to exist.

THE

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THE EDITOR of this JOURNAL would be glad to receive any items of general interest in regard to local events, or matters that it is desirable to call to the attention of the profession. Letters written for publication or containing items of information, should be accompanied by the writer's full name and address, although not necessarily to be published. All communications in regard to editorial work should be addressed to the Editor.

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SATURDAY, JUNE 14, 1884.

NEW MEMBERS OF THE ASSOCIATION AND THE JOURNAL.—We have received a few letters from new members or those who first acquired membership by attending, as delegates, the recent meeting of the Association in Washington, manifesting some impatience because they had not immediately commenced receiving the JOURNAL. We wish to state for the benefit of all parties that the editor and publisher are entirely dependent upon the Permanent Secretary for the minutes or official record of proceeding of each annual meeting; and upon the Treasurer for the names and addresses of all members, new or old, who are entitled to the JOURNAL from having paid their annual dues or membership fees.

The number of new members at Washington was unusually large, and to separate the new names from the old, the whole registration list must be carefully compared with the previous roll of paying members, requiring no little time and patience on the part of the Treasurer. When he had completed his work, and forwarded the names and addresses of between four and five hundred new members to this office, a considerable number of them were found to have been taking the JOURNAL as subscribers, and consequently their names were already on the mailing list. To prevent duplicating these, necessitated a close comparison of the new list with the mailing books throughout. These necessary preliminaries were not completed until the first week in June, during which the JOURNAL was mailed to nearly all the new members, although their regular Journal year will not commence until the first number in July, which begins the third volume. For it must be remembered that the membership fees for 1883 paid for volumes one and two, commencing July 1, 1883, and ending June 30, 1884; and the dues for 1884 pay for volumes three and four commencing July 1, 1884, and ending June 30, 1885. Consequently all numbers sent to new members between the time of the annual meeting and the first of July will be gratuitous, or in excess of their regular Journal year, during which they will have the two volumes, for which they pay, complete with title-page and full index for each.

THE HOSPITAL COLLEGE OF MEDICINE OF LOUISVILLE, KY.—This institution, which constitutes the Medical Department of Central University, held its regular annual commencement exercises on the evening of May 29, 1884, and conferred the degree of M.D. upon thirty-one candidates. The valedictory address in behalf of the Faculty was delivered by Prof. Dudley S. Reynolds, who, with many other items, gave the class the following good advice: "You should join the medical societies to which you are eligible. Comparison of experience and interchange of opinions strengthen and enlarge your views of practice. Publish all your particularly interesting observations and experiences for the benefit of your brethren." And he should have added, "keep a faithful record of all acute cases of disease, especially in reference to date of beginning, apparent etiological conditions, and results of treatment." Such a record commenced in the beginning of professional life, begets a habit of closer observation, greater accuracy of knowledge, and furnishes a storehouse of facts capable of correcting many erroneous general impressions made by the popular sentiments and doctrines everywhere surrounding the practitioners of the healing art. It was also announced that hereafter a moderate standard of general education will be required of all new applicants for admission to the courses of medical instruction in the college.

THE TREASURER'S REPORT.—The detailed report of the Treasurer of the American Medical Association, which should have been included in the Secretary's minutes of the recent annual meeting, will be found in another part of this number of the JOURNAL. It was unintentionally omitted from the minutes as furnished at the proper time.

MEMBERSHIP DUES AND SUBSCRIPTIONS.—Under the head of Miscellaneous matter will be found a standing official notice on this subject by the Treasurer. As there stated, all membership dues should

be paid to the Treasurer of the Association; and if not paid at the annual meeting, they should be remitted by mail to him (Rich. J. Dunglison, M.D., Lock Box 1274, Philadelphia, Pa.). If members fail to pay their dues for three years in succession, after due notice from the Secretary, they lose their membership. And if a member fails to pay his dues for one or two years, he cannot retain his membership by simply paying the dues for the *third* year; but the arrearages for all the years must be paid. We call attention to this, because the Association took direct action on the subject at its recent meeting, and left no discretion with the Treasurer in relation to the construction of the rules relating to the subject. We wish to call special attention, also, to the fact that under the new constitutional provision for admitting members by *application*, the application should be made in writing, directed to "the Treasurer of the Association," and accompanied by the membership fee, five dollars, and by a certificate of good standing as a member of the State or local Medical Society where the applicant lives, signed by the President and Secretary of such Society. Only subscribers to the JOURNAL who are not members of the Association, and advertisers, should remit money to the publication office, 65 Randolph street, Chicago, Ill.

SCARLATINA IN UTERO.—In an interesting paper read before the New York County Medical Association, April 21, 1884, Dr. Charles A. Leale relates a well marked case of scarlet fever in a child at birth. The mother was attacked with the disease at the end of the ninth month of pregnancy. Labor was induced when she was in the early part of the eruptive stage of the fever. The child was readily delivered with the forceps, and "was unmistakably in the midst of the eruptive period simultaneously with its mother."[1]

The disease proved highly malignant in the mother, causing her death fifty-six hours after her delivery. The child recovered. Such cases are very seldom met with, although a few are on record.

EPIDEMICS OF CHOLERA AND YELLOW FEVER.—Reports show that up to April 12, 1884, the cholera had been on the increase in Calcutta, while yellow fever prevails only very moderately in Rio de Janeiro, Havana and some other places within its native limits.

Whether either of these dreaded scourges will extend beyond their ordinary limits during the present summer remains to be seen. The health authorities in the South and Southwestern States are taking active measures to prevent any invasion of those States.

[1] MEDICAL NEWS of May 31, 1884.

LONG ISLAND COLLEGE HOSPITAL.—At the annual commencement of this college, held May 21, 1884, the degree of M.D. was conferred upon 44 candidates.

SOCIETY PROCEEDINGS.

CHICAGO MEDICAL SOCIETY.

The semi-monthly meeting of this Society was held on the evening of May 5, 1884, when two important papers were read. The first being on "Puerperal Septicæmia and Prophylaxis of Puerperal Inflammations," which was ably presented by Dr. G. Frank Lydston, wherein he differed from many eminent writers on these subjects. The paper is some 70 odd pages in length, written on legal cap, and consumed the greater part of the evening's session. Below will be found a brief synopsis. After reviewing with some vigor the discussion of "Puerperal Fever," in a New York journal, and that of the New York County Medical Society, and the admirable essays upon the subject by Drs. Thomas and Garrigues, the writer asks, What is puerperal fever? To define this, he stated, is a most difficult problem. Referring to the descriptions of Leishmans, Hervieux and Lusk, how widely different are their definitions, made at intervals extending over a period of years. Barker states that puerperal fever is an entity. To assume that diseases which may occur from numerous and most diverse causes in the non-puerperal female should change and become suddenly "specific" is illogical.

The writer did not, however, wish to be understood as advancing any arguments in favor of ignoring the danger of septicæmia, but simply offering a protest against what he was pleased to term the "septophobia" prevalent in some quarters. In other words, defined his position as midway between the two extremes of practice. Through the medium of the placenta, there is a constant interchange of nutritive and waste materials between the vascular systems of the mother and child. The former is far in excess of the latter, and is a physiological necessity. In this process of osmosis, the fluids are chiefly towards the child. At birth, however, all this is changed, and the osmosis is in the direction towards the maternal circulation. The afferent current is checked, and the lymphatics and veins of the mother are more active than ever, as it is mainly through them that the retrograde metamorphosis of tissue occurs, and which is the essence of physiological uterine involution. Or, as is described later in the paper, the function of the lymphatics and veins of the puerperal woman, is to remove those nutritive materials which by the removal of the fœtus have been rendered unnecessary. That a large amount of waste

material is thus removed is evidenced by the peculiar character of the colostrum. This, rather than the patulous condition of the uterine sinuses, is the most important physiological circumstance favoring septic absorption, for with the products of retrograde metamorphosis of tissue, we are likely to have absorbed the products of putrefactive changes. The so-called "Milk Fever" may also be ascribed to this cause, that is not necessarily injurious, as experienced obstetricians have lately stated, and Lusk states, that round micrococci are the necessary causal element of true septic fever. This, if it be true, agrees very well with the view just advanced. Lydston's belief is that milk fever is simply due to hyper-activity of the nutritive functions, resulting from the sudden introduction of an excessive amount of nutritive material into the circulation. It will be observed that the fever lasts only until the excess of material has had time for elimination chiefly through the selective action of the mammary glands. Of course, it must be admitted, that if products of putrefaction be also introduced, the rise of temperature and danger of eventuation in septicæmia will be proportionately increased. * * * * * * * * * * * * * Pale, weak, anæmic women are most liable to develop septicæmia, while if more robust women are sick at all, are most likely to be attacked by some variety of *local inflammation*, yet, should the latter have the clinical characteristics of a typical case of the disease. The origo-mali in the first case cannot be the same as that of the second, and the two forms will depend upon widely different causes in spite of the theory of the common cause, "septic absorption." Hypothetical typical cases of "puerperal fever," "local inflammations," with moderate and quite intense fever, etc., etc., were clearly illustrated and graphically described in a few succeeding pages of the paper where one woman that has passed through labor is a victim to toxic infection, whilst the other, who is plethoric, is markedly predisposed to inflammation. The one, whose tissues do not want for an abundance of nutritive pabulum. The other, whose tissues fairly crave for supplies of new material, and who practically speaking is a huge sponge ready for the absorption of any materials of an organic nature.

The writer though being inclined to believe that septæmia may occur from the absorption of fluid from which bacteria are absent,—sepsin—in its results, differs not at all from snake virus, and its destructiveness depends in a great measure upon local and constitutional conditions in the affected individual. In "pyæmia," however, which is but one grade of "septicæmia," bacteria must necessarily be present. In certain cases of mild febrile attacks following child-birth, it may be simply a traumatic fever. This, while often due to septic absorption, may also be due to nervous influences, or traumatic fever, resulting from nutritive disturbances (as shock) which is due to excessive reaction following nervous depression. Shock also may be due to the use of instruments. Malarial fever may also come on in the puerpera. Certainly then septic infection may not be present in any of these instances, and yet the case is diagnosed as septicæmia. In certain cases of septic infection, following labor, we have diffuse suppurating abscesses, differing little, if any, from "pyæmia" that may follow surgical operations, but the characteristic temperature curve is exceptional in the former, which is present in "pyæmic" fever. This form of puerperal septicæmia is sometimes very chronic, resulting in gluteal abscesses, and even secondary suppurative processes have been found (by himself) at the autopsy in the liver and kidneys. The causal element of the phases of diseases usually termed respectively pyæmia and septicæmia is the same, but the former is a misnomer. In one we have the formation of thrombi which contain micrococci and which become detached, enter the circulation until they lodge and form new foci for suppuration, etc., etc., etc., while in the other no thrombi are formed, or if formed, became so rapidly and thoroughly disintegrated that secondary suppurations do not result. Comparative illustrations were then given why metastatic abscesses cannot result from dissecting a wound which is septicæmic. In a general way the formation or non-formation of thrombi depends upon the intensity of the infection and the local and constitutional conditions present. Metastatic abscesses are quite exceptionally seen in the puerpera. This may be due (in part at least) to the fact that the patients are so speedily destroyed by the intense infection characteristic of puerperal septicæmia. Thomas goes to the extreme of attributing all puerperal disorders to the absorption of septic poison, and in further quoting that author, according to the writer, it matters not whether the disease be a phlebitis, cellulitis, lymphangitis, or peritonitis; the essence of the disorder is the absorption of poison into the blood of the puerperal woman through some solution of continuity in the genital tract. How about exposure as a cause?

Phlebitis following labor may give rise to the disease known as phlegmasia dolens, and may result from trauma, especially if exposure be superadded; or it may arise from simple thrombosis occurring independently of bacteria or septic processes in the same manner as cellulitis may arise. * * .* * * A "locus minoris resistientiæ" may be afforded, and the women being especially susceptible to cold and depressing influences of all kinds, it remains but for an exposure to a draught of air to light up an inflammation of the uterus constituting a metritis, or a pelvi-peritonitis, or cellulitis. The simple passage of a sound into the non-pregnant uterus has been known to produce pelvic inflammation, severe cellulitis, etc., etc. A rapidly fatal general peritonitis has also been caused in the puerperal woman by simple extension of the pelvic peritonæum. In these cases if septicæmia occur at all, it is secondary to, or a complication of the inflammatory affection.

Before closing the review of this portion of the article the reporter wishes to *add* again that Dr. Lydston does not deny that puerperal peritonitis undoubtedly often is septic in origin, but he emphatically insists that it is not always so, and that there is not a characteristic "septic peritonitis." * * * * *

Regarding the conversion of the poison of the exanthemata into a specific "puerperal poison," the

writer states *it is absolutely untenable* for the reasons explained in his paper.

The "Unity" of the "materies morbi." The apparent inter-dependence of the poisons of different diseases were to some extent forcibly impressed in the paper by the writer's citation of numerous cases, and the variations dependent upon sanitary surroundings, etc., etc.

Considerable space was devoted to the diphtheria of puerperal wounds, and puerperal erysipelas. The former happily is not of very great frequency, and it has possibility or a strong probability of parasitic origin along the genital tract. The latter disease, however, may be located remote from the genitals the same as in non-parturient women, a number of instances of which were given.

Some cases of erysipelas were also given which could be traced to no other cause than cold and exposure to dampness, apparently independent of possible contagion.

Regarding prophylaxis of the puerperal diseases, said the writer: Bi-chloride of mercury, antiseptic pads, and injections, with bare walls, floors, and other surroundings characteristic of small-pox and typhus fever, are not a necessity in the lying-in chamber. In private practice almost non-interference can be carried out, but under the present system of hospital construction this plan can rarely be so absolute. Several pages were devoted to giving his experience, while Resident-Surgeon at Charity Hospital, New York, at Maternity Hospital, etc., and statistics which, on comparing with those given by Dr. Garrigues, do not well tally or correspond. From August, 1880, to December, 1880, there were confined in Maternity proper 50 selected cases. Of these, 5, or 10 per cent., died of puerperal metritis, septicæmia, or peritonitis. In the waiting wards, during the same months, there were confined 72 cases, also selected. Of these, 6 died, only 3 of which, or about 4 per cent., died of septic infection. During October and November the writer delivered, in the waiting wards alone, 25 women, of whom 1 died, and she of extensive heart lesions and pulmonary œdema. During these same months 30 out of the 50 cases cited from the Maternity records, 5 fatal cases occurred, making a mortality for the two months of 16⅔ per cent. from septicæmia at the Maternity proper. In 1875, the first year of the occupancy of the Maternity Hospital, there were 570 deliveries, with a mortality of 15, or 2.67 per cent. In 1881 the mortality fell to 2.36 per cent. In 1877 it rose to 6.67 per cent., the reasons of which were elaborately dwelt upon.

During the service of Dr. B. Wood at the Maternity, of 68 cases there were 3 deaths (from all causes). In the next two months, of 62 cases 3 deaths occurred, 1 of which was due to septicæmia. The grand total for the waiting wards and pavilions from August, 1880, to April, 1881, was 202 cases, with a mortality of 12, only 5 of which, or a little more than 2½ per cent., were due to septicæmia or puerperal fever. Of 130 cases, the writer stated, the let-alone plan of treatment was more rigid than his own, vaginal injections not being allowed. From April, 1881, to April, 1882, 423 cases were delivered, with but 2 deaths from puerperal fever. The treatment of this series was also non-interference. On the other hand, the writer stated, he has seen the temperature rise and pelvic inflammations follow the use of frequent vaginal injections, and cases which may eventuate in puerperal septicæmia and lead to a fatal issue would often do well and make a perfect recovery if let alone and kept quiet, and free from CURIOUS visitors. As for prophylactic intra-uterine injections, the man who uses them will sooner or later come to grief, in making too general use of this procedure. Regarding "placental compression," or Crede's method, to "press it out," is almost invariably absurd and pernicious. No more harm or serious result is likely to arise at the present time from a few minutes retention of the placenta than there was centuries before Crede was ever heard of. Without wishing to underrate the importance of freeing the womb from putrescible substances, the writer deplored the practice of inserting one's hand into the uterine cavity, seeking for an imaginary piece of placenta or for portions of secundines of microscopic size. Another, yet more clear illustration of the advantages of the non-interference plan of treatment in obstetrical practice, was cited while the writer acted in the capacity of Resident-Surgeon to the New York State Hospital for Emigrants, where the deaths occurring from septicæmia were in the minimum. A year since a so-called "reform" was instituted there in the emigrant service. The *prophylactic* injections and complicated manipulations were introduced, and with the direct and immediate effect of increasing the mortality rate, which became alarmingly high. Simultaneously upon Ward's Island there were present a large number of Russian-Jewish refugees, who were filthy and were mentally despondent. Upward of 90 of these women were delivered without a death. There were numerous forceps deliveries, but there was absolute non-interference in the after-treatment. Here was a good opportunity to compare fancy-midwifery results with the let-alone method.

Primary Operation for Perineal Lacerations.—In severe lacerations the primary operation is very essential, and often productive of the best results, but the tendency is toward too much routine practice in this respect, especially in hospitals. Those of less degree will heal of themselves. Chromated catgut is probably the best material for sutures to be used in deep and extensive lacerations, which it is desirable to repair at once and thus diminish the surface for septic absorption; but if a laceration extend completely into the rectum, the tendency is to the secondary in preference to the primary operation. Meanwhile, cleanliness and iodoform are the most important elements of treatment. In some cases the slight fever resulting from the sutures is likely to prevent the secretions, and convert them into a favorable nidus for the development of bacteria. In general the operation is very successful if properly performed. Instrumentation or passage of a catheter at frequent intervals is unnecessary. A bed-pan should be used, and a stream of iodized water from a fountain-douche allowed to flow over the vulva during

urination. Iodine is a more efficient deodorizer than carbolic acid, being destructive to bacteria in a strength of 1 to 5,000. Bichloride of mercury, if used, should be in very dilute solutions; and in view of its chemical action in forming albuminates, its superior usefulness may be questioned. A few other general suggestions for this accident closed the succeeding few pages upon the primary operation.

Injections during Labor.—This is recommended by some of our antiseptic extremists. Lydston's remarks condensed were: They are not only useless, but injurious, and all unnecessary manipulations, as introduction of the hands frequently within the rimæ vulvæ is prejudicial to the safety of the patient, and only that which is consistent with careful watching of the case should be attempted.

Tardy Delivery.—The use of the forceps at the second stage, care in changing the linen of the patient, (first by warming it), also the same should be done with a cold bed-pan before placing it under a patient, were the chief items requiring attention.

Administration of Ergot.—It is undoubtedly prophylactic of puerperal diseases, for it produces uterine contraction and hastens involution. In feeble subjects and after severe or instrumental deliveries, give small doses of the drug with quinine for a week or ten days. Hour-glass contraction should be carefully guarded against and borne in mind before the placenta has been expelled, although this condition is rare. After labor a pad of oakum placed over the vulva is much neater than a napkin. The potency of germs and the value of antiseptics are well appreciated, but the woman should now be interfered with as little as possible. We should regard labor as a physiological process rather than in the light of being pathological. Women are to-day entitled to the same natural advantages that they were long before syringes, antiseptics and microscopes were ever dreamed of, although when fœtor or suppression of the lochia indicate danger, intra-uterine injections, and other hygienic measures are demanded, and in these severe cases a glass tube after being introduced may be left in *situ* until danger is passed. Even constant irrigation may be advisable. Jones, of St. Paul, has recently reported several interesting cases in which they were useful. Sloan recommends suppositories of iodoform and eucalyptus. Curetting would not be proper excepting when portions of secundines were known to be left. The success also of the iodine treatment in typhoid fever ought to be a good basis for its use in septicæmia. Also antipyretics, as the salicylate of iron is almost specific in its action, this will often rapidly lower the temperature where quinine has failed. The hot vaginal injections to be effectual should be given through a cylindrical speculum. The faradic current was spoken of as one of the best remedies to induce resolution of pelvic exudations. * * * General peritonitis complicated by septicæmia is the most fatal disease to which the puerpera is liable, the vital powers being overwhelmed by a most powerful poison. The treatment suggested for septicæmia comprises the measures already stated, in combination with very free use of opium and stimulants. Hot applications over the abdomen, or, perhaps, cold, applied may be a useful measure in this fatal malady, and to support the system in its efforts to rid itself of the poison already absorbed. About six pages of goodly advice to our esteemed bacteriophobic friends in the East, and to those having direct charge of Maternity Hospitals eloquently closed what probably is one of the most comprehensive papers upon a single topic ever presented to this society. But many valuable formulæ and interesting points in this review have been unavoidably omitted.

Fracture of the Greater Tuberosity of the Humerus Extending into the Bicipital Groove, was the subject of a paper read by Dr. F. C. Schaefer, who also presented the case of a man, 55 years of age, having met with this rare form of fracture. As the paper is not at our command we must limit our remarks, which are from memory. Two years ago the patient received an injury to his shoulder by falling forward from a height of about three feet, resulting in fracture of this variety. The various fractures and dislocations of the joint were enumerated at the time of reading the paper, and the characteristics of this lesion were given as follows: A flattening of the shoulder and an increase in its antero-posterior diameter. At first this will suggest that there is a dislocation. This flattening is caused by the drawing backward of the fragment of bone by the attached muscles and consequent crowding forward of the head of the humerus. The displacement leaves a deep sulcus in place of the bicipital groove. Crepitation confirms the diagnosis. After the subsidence of the inflammation consequent to the injury, there was partial fibrinous anchylosis of the joint, which was with great difficulty broken up. At the present time upward and backward extension of the arm is but slightly limited, as was demonstrated by the mobility of the limb. The alteration in shape of the upper part of the bone is evident on palpation, though this was barely perceptible to the eye, the patient being somewhat *embonpoint*, and an almost perfect recovery had been the result of treatment. The speaker, in conclusion, cited several cases of this injury in which the diagnosis had been confirmed by autopsy. Perhaps not more than ten cases of this rare form of fracture are on record.

The case was examined by the members present, and its peculiarities informally discussed.

Owing to the late hour, and the fact that a number of our members, who are experienced surgeons and obstetricians, had gone to Washington to attend the National Medical Association, a motion prevailed that discussion of both the above papers be deferred until a future meeting. L. H. M.

ILLINOIS STATE MEDICAL SOCIETY.

TUESDAY, MAY 20, 1884—FIRST DAY.

The thirty-fourth annual meeting of the Illinois State Medical Society commenced its sessions on Tuesday morning, May 20, 1884, at 10:30 A. M., in the First Methodist Church of Chicago. There were about two hundred delegates and members present.

The President, Dr. Edmund Andrews, of Chicago, called the meeting to order, and an appropriate prayer was offered by Rev. A. E. Kittredge. Dr. E. Ingals in behalf of the Committee of Arrangements gave an address of welcome, which was responded to by Dr. S. K. Crawford, of Monmouth.

Dr. D. W. Graham, Chairman of the Committee of Arrangements, presented the following as the order of business: Reports of the Committees on Practical Medicine; Surgery; Obstetrics; Gynæcology; Ophthalmology and Otology; Drugs and Medicines; Necrology, and Special Committees appointed last year. Volunteer papers on various topics were in the hands of the Committee from Drs. F. C. Shaefer, F. C. Hotz, A. B. Strong, R. H. Babcock, C. Fenger, D. W. Graham, H. A. Johnson, C. E. Webster, J. S. Whitmire, C. W. Earle, David Prince, E. C. Dudley, C. T. Parkes, W. P. Verity and R. Tilley. The Committee recommended that the sessions be held from 9 A. M. to 12 M., and from 2 to 5 P. M.

The Society was invited to visit all of the public institutions, the County Hospital, parks, Academy of Sciences, and points of attraction at 4 o'clock this afternoon.

Dr. C. W. Earle moved the reference of several papers to the proper committees, and on motion a paper by Dr. Prince on "Palatoplasty" was set for reading at 2 P. M., and one by Dr. C. Fenger on "The Diagnostic Peculiarities of Malignant Growths" at 10 o'clock next morning.

The President, Dr. E. Andrews, then delivered his annual address, which was devoted chiefly to a discussion of the nature of ethics and etiquette in general, and their relations to the medical profession. The address was well received, and at its close on motion of Dr. E. Ingals, it was referred to the Committee of Publication, and a vote of thanks tendered to the author.

Reports of Standing Committees being ordered, Dr. J. C. Frye, of Peoria, Chairman of the Committee on Practical Medicine, presented his report. He stated that after receiving the appointment of chairman of the Committee he was taken ill, and therefore been unable to do full justice to his subject. He called upon Dr. McIlvaine, of Peoria, to read his report. He regarded the germ theory of disease as one of the most important branches of medical science. The paper as read, treated largely of the germ theory of disease, the advancement made in the diagnosis and treatment of many of the more prevalent diseases, and detailed the medicines and quantity of the same given in notable cases.

THE AFTERNOON SESSION.

At the opening of the afternoon session, Dr. Graham moved that the action taken in the morning regarding the report from the Committee on Arrangements be rescinded, and the Society concurred. On the motion of the same gentleman, the order of business was made as follows: 1. Reports of standing committees. 2. Reports of special committees. 3. The reading of voluntary papers.

Dr. Prince spoke on the subject of "Palatoplasty," showing how successful operations could be made on the palate to overcome impediments in speech. To illustrate his topic, a small boy who was treated was induced to read a few lines, which he rendered in a very creditable manner.

The list of members of the Society and delegates from other societies was then read by Dr. J. F. Todd, the Assistant Secretary.

Dr. Roswell Park, formerly of Chicago, now of Buffalo, N. Y., Chairman of the Standing Committee on Surgery, presented an interesting report, commenting on the recent advances in the different departments of surgery. He said one heard but little at present concerning the once favorite spray application of solutions to wounds for preventing septicæmia and promoting repair. The general principles of antisepsis were becoming better established, and the properties of particular antiseptics better appreciated. The poisonous properties of carbolic acid were limiting its use in the best institutions both in this country and Europe. Time, and additional clinical observations, had strengthened the favorable opinions he had formerly expressed in regard to the value of naphthaline as a soothing and antiseptic application in dressing wounds and injuries. He stated that surgical pathologists had discovered erysipelas to be a germ disease; the specific quality of the germs having been demonstrated by the successful inoculation of dogs. He alluded to several successful cases of skin grafting over large surfaces, and to pulmonary surgery. In the most important cases of the latter, he claimed that the most eminent operators had abandoned the use of thermol and boracic and carbolic acids, and had substituted solutions having salicylic properties. He alluded to the case of one patient, who had nearly the whole upper lobe of the left lung separated from the pleura and removed. The patient lived until the ninth day, when it was claimed that he died from carbolic acid poisoning. He also alluded to successful resections of the larynx, and to the recent case of resection of the trachea which had been performed in London, followed by entire recovery.

Dr. D. S. Booth, of Sparta, Ill., related a case of extensive gunshot wound, in which the breast, armpit and side of the patient, were perforated and extensively torn; but which recovered by rest, cleanliness, and judicious attention to position.

Dr. Henry Gradle, of Chicago, read a paper on Practical Medicine supplemental to that of Dr. Frye, in which he devoted attention chiefly to the germ theory of disease, giving many observations and diagnoses, and the course of treatment pursued to destroy the bacilli found in many diseases. Referring to cholera he said that the bacilli made their way into the intestines while the patient was suffering from indigestion; when the digestion was good they were carried off. The paper also reviewed the recent discoveries made by Koch and Pasteur in their investigations of the bacillus-tuberculosis and in tracing the bacteria that create various diseases.

Dr. J. A. Robison, of Chicago, read a paper on "Alkaloidal and Kindred Medication," in which he demonstrated that crude drugs vary much in the number of active medicinal properties; that the pro-

cesses of manufacture of these drugs into tinctures and fluid extracts are very faulty. He further demonstrated the vast progress which had been made in the chemistry of inorganic drugs, and urged the application of the principles of organic chemistry to medicinal plants; extracting their active principles and recombining them in preparations of uniform chemical composition, definite therapeutic powers, and ease of administration.

Dr. L. H. Corr, a lady physician of Carlinville, from the Committee on Gynæcology, read a paper on the diseases of women, which had special reference to some plastic operations, and possessed the merit of concise briefness.

On motion of Dr. Hollister it was decided to witness at 2 o'clock Wednesday, the practical demonstrations of subjects afflicted with paralysis of the vocal chords, to be introduced by Drs. Johnson and Graham.

On motion of Dr. Ingals the President's address was referred to a special committee consisting of Drs. Ingals, Hamill, and Graham, with instructions to report before final adjournment.

The Society then adjourned until 9 o'clock Wednesday morning.

SECOND DAY.

The second day's session was called to order in the First Methodist Church at 9:15 o'clock Wednesday morning by the President, Dr. Edmund Andrews. Dr. E. Ingals, Chairman of the Committee on Necrology, read a report, in which it was stated that he had during the year obtained a necrological report from the State Board of Health, in which were recorded the deaths of 108 physicians between 1882 and 1883. Among the number there were no names of members of the Illinois State Medical Society. Of seventy-nine doctors whose death had been reported, the average age was 52 years. He thought physicians ought to hold on to life longer than that, and said that the record indicated that they did not take good care of themselves. The members of the Society who died during the past year were Dr. Joseph Osmond Hamilton, of Jerseyville, and Dr. C. E. Parker, of Beardstown. The former was President of the Society in 1881, and was born at New Design, now Waterloo, Monroe county, April 2, 1824. His father, Thomas S. Hamilton, was a descendant of the Preston branch of the Scottish house of Hamilton.

Dr. Parker settled at Beardstown in 1855. He was a graduate of Yale College, and practiced in Massachusetts prior to coming West. He died of hemiplegia. The report was accepted and placed on file.

[TO BE CONCLUDED NEXT WEEK.]

MISCELLANEOUS.

TREASURER'S REPORT.

DR. RICHARD J. DUNGLISON, TREASURER, IN ACCOUNT WITH THE AMERICAN MEDICAL ASSOCIATION.

1883.		DR.
June 5,	To Cash Balance as per Report to Association	903 95
June 10,	To Cash from Delegates and Permanent Members at Cleveland Meeting—less exchange.	5,008 75
1884.		
May 5,	To Cash Sales of Index of the Transactions	198 00
May 7,	To Cash Amount received for Annual Dues, Subscriptions to the JOURNAL, Advertisements, etc., to date	7,810 60
		$13,921 30
1883.		CR.
June 8,	By Cash paid Dr. X. C. Scott, Chairman Committee of Arrangements, Cleveland, Rent of Halls, Printing, etc.	603 50
June 10,	By Cash paid Wm. F. Fell & Co., Printing	41 55
July 5,	By Cash paid Rich'd J. Dunglison, Treasurer—Travel, Postage, etc., as per order of the Association	64 85
July 9,	By Cash paid annual dues refunded Dr. Goodwillie, as per order of the Association	5 00
July 10,	By Cash paid Dr. N. S. Davis, Committee on Meteorological Observations	108 60
July 10,	By Cash paid Dr. C. H. A. Kleinschmidt, Librarian, as per order of the Association	200 00
Aug. 13,	By Cash paid Wm. F. Fell & Co., Printing Circulars, Stamped Envelopes, etc.	55 45
Aug. 14,	By Cash paid Wm. F. Fell & Co., Printing and Binding Index of Transactions	523 00
Sept. 29,	By Cash for Postage, Expressage, etc.	30 44
Oct. 30,	By Cash paid Dr. N. S. Davis, Committee on Meteorological Observations	250 00
Nov. 9,	By Cash paid Wm. F. Fell & Co., Printing Circulars, Postals, etc.	5 50
1884.		
Feb. 25,	By Cash paid H. M. Barnes, Services as Clerk	50 00
April 29,	By Cash paid Dr. W. B. Atkinson—Travel, Expressage, Postage, etc.	82 75
April 29,	By Cash paid F. Leypoldt—Guarantee Fund, "Index Medicine," as per order of the Association	50 00
April 29,	By Cash paid H. C. Lea's Son & Co., cash advanced for Postage, Index and Transactions	30 35
April 29,	By Cash for Postage, Expressage, Telegrams, etc.	32 38
April 29,	By Cash paid Dr. C. H. A. Kleinschmidt, Librarian, Expenses of Library	15 29

May 5, By Cash paid for Publication and Editorial Expenses of JOURNAL to date..... 9,560 57
May 5, By Cash Balanced..... 2,212 07

$13,921 30

RICHARD J. DUNGLISON,
Treasurer.

WASHINGTON, May 8, 1884.

This certifies that we examined the foregoing accounts and accompanying orders and vouchers, and find them correct in all respects.

(Signed,) ALONZO GARCELON,
Auditing Com. of Amer. Med. Ass'n.

OFFICIAL NOTICE.

ANNUAL DUES from members of the Association—*Five Dollars* per annum—are payable directly to the Treasurer. Such payment entitles them to receive the JOURNAL of the Association for one year.

SUBSCRIPTIONS TO THE JOURNAL from those who are not members should be forwarded to the office of publication, Chicago.

BACK VOLUMES OF THE TRANSACTIONS may be procured, at reduced rates, by addressing the Treasurer.

THE INDEX to the 33 Volumes of Transactions will be forwarded, postpaid, on receipt of *One Dollar* by the Treasurer.

According to a resolution passed May 9, 1884, at the Washington meeting, continuous payment of Annual Dues is required, to retain permanent membership. RICHARD J. DUNGLISON, M.D.,
Treasurer.

Lock Box 1274, Philadelphia, Pa.

OFFICIAL LIST OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT UNITED STATES ARMY, FROM MAY 31, 1884, TO JUNE 6, 1884.

Heger, Anthony, Major and Surgeon, assigned to duty at Fort McHenry, Md., as Post Surgeon. (Par. 1, S. O. 108, Headquarters Department of East, June 2, 1884.)

Baily, Jos. C., Major and Surgeon, now on leave of absence, is relieved from duty in Department of Texas, and ordered to report to Commanding General, Department of the East, for assignment to duty at Fort Monroe, Va., to relieve Lieut. Col. Charles Page, Surgeon, United States Army, on July 1, 1884, from duty at that Station.

Lieut. Col. Page, on being relieved by Major Baily, will proceed to Fort Leavenworth, Kans., and report to Commanding General, Department of the Mo., for assignment to duty as Medical Director of that Department (Par. 12, S. O. 125, A. G. O., May 29, 1884.)

Wright, J. P., Major and Surgeon, directed to perform, temporarily, in addition to his other duties, those of Medical Director, Department of the Mo. (Par. 2, S. O. 107, Headquarters Department of Mo., May 28, 1884.)

Huntington, David L., Major and Surgeon, during the absence of the Surgeon General, directed to take charge of the office of the Surgeon General and perform his duties. (Par. 6, S. O. 129, A. G. O., June 4, 1884.)

Bentley, Edwin, Major and Surgeon, assigned to duty at Fort Clark, Texas, as Post Surgeon (Par. 1, S. O. 68, Headquarters Department of Texas, May 31, 1884.)

Koerper, Egon A., Captain and Assistant Surgeon, assigned to duty at Fort Keogh, M. T. (Par. 1, S. O. 58, Headquarters Department of Dakota, May 27, 1884.)

Barnett, Richards, Captain and Assistant Surgeon, now on sick leave of absence, is relieved from duty at Columbia Bks., Ohio, and ordered to report to Commanding General, Department of the East, for assignment to duty. (Par. 2, S. O. 129, A. G. O., June 4, 1884.)

Middleton, Passmore, Captain and Assistant Surgeon, granted leave of absence for one month on surgeon's certificate of disability (Par. 2, S. O. 107, Headquarters Department of Mo., May 28, 1884.)

Wilson, Geo. F., First Lieutenant and Assistant Surgeon, relieved from temporary duty at Fort Canby, Washington Territory, and ordered to return to his proper station, (Fort Walla Walla, Washington Terr.) (Par. 2, S. O. 70, Headquarters Department of Col., May 26, 1884.)

Owen, Wm. O. Jr., First Lieutenant and Assistant Surgeon, having reported at these headquarters in compliance with par. 5, Department Special Orders, No. 62, current series, will return to, and take station at Fort Stevens, Oregon.

In addition to his duties at Fort Stevens, Assistant Surgeon Owen will perform those of medical officer at Fort Canby, Washington Territory. (Par. 1, S. O. 70, Headquarters Department of Col., May 26, 1884.)

Moore, John, Lieutenent Colonel and Assistant Medical Purveyor, ordered to perform in addition to his present duties, those of medical storekeeper, San Francisco, Cal.

Johnson, Henry, Captain and Medical Storekeeper, relieved from duty at the medical purveying depot at San Francisco, Cal., and ordered to report for duty at the medical purveying depot, New York City, relieving Captain Andrew V. Cherbonnier, medical storekeeper.

Captain Cherbonnier, on being relieved by Captain Johnson, will proceed to St. Louis, Mo., and report in person to Captain Geo. T. Beall, medical storekeeper and acting assistant medical purveyor, for duty at the purveying depot at St. Louis, relieving Captain Beall of his duties as medical storekeeper. (Par 9, S. O. 125, A. G. O., June 3, 1884.)

Fryer, Blencowe E., Major and Surgeon, granted leave of absence for one year from July 1, 1884. (Par. 7, S. O 128, A. G. O., June 3, 1884.)

Hall, John D., Captain and Assistant Surgeon, granted leave of absence for three months, to take effect on his arrival at St. Paul, Minn. (Par. 8, S. O 128, A. G. O., June 3, 1884.)

LIST OF CHANGES IN THE STATIONS OF MEDICAL OFFICERS, U. S. NAVY, FOR THE WEEK ENDING JUNE 7, 1884.

Passed Assistant-Surgeon T. M. Murray, detached from U. S. S. "Passaic," ordered to U. S. S. "Constellation."

Assistant-Surgeon W. Martin, detached from U. S. S. "Constellation," ordered to U. S. S. "Passaic."

P. A. Surgeon T. C. Craig, detached from U. S. S. "Minnesota," ordered to U. S. S. "Vandalia."

P. A. Surgeon C. W. Deane, detached from U. S. S. "Vandalia," ordered to U. S. S. "Minnesota."

P. A. Surgeon J. H. Hall, detached from U. S. S. "Minnesota," ordered to Naval Hospital, Brooklyn.

Medical Director P. S. Wales, to continue present duty until August 1, 1884.

Surgeon H. M. Wells, to continue temporary duty at Naval Laboratory.

P. A. Surgeon E. H. Marsteller, detached from U. S. S. "Vermont," ordered to U. S. S. "Monongahela."

Assistant-Surgeon H. B. Scott, commission to date from July 11, 1883.

Assistant-Surgeon V. C. B. Means, commission to date from June 3, 1884.

Assistant-Surgeon F. A. Hesler, commission to date from June 3, 1884.

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THE AMERICAN MEDICAL ASSOCIATION

AND OF ITS SEVERAL SECTIONS, 1884–5.

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Place of meeting, 1885, New Orleans, La.; Time of holding meeting, last Tuesday in April.

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—THE—

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THE TREATMENT OF COMPOUND FRACTURES, INCLUDING A REPORT OF ONE HUNDRED AND FORTY-FOUR CASES WITHOUT A DEATH FROM SEPTIC INFECTION, AND ONE HUNDRED CASES WITHOUT A DEATH FROM ANY CAUSE.

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MR. PRESIDENT AND GENTLEMEN:—The treatment of compound fractures is a subject of great practical importance. In advocating any special plan of treatment there are several salient points to consider.

First. The method should be a safe one and proved to be such by the crucial test of experience.

Second. The method of treatment should yield results, unattended by septic infection, by non-union, by shortening, and by deformity.

Third. The method should be a simple one, and uncomplicated by any inaccessible splint, or complicated dressing.

That plan of treatment of compound fractures, therefore, which has safety, complete restoration of the injured member, absolute simplicity, and at the same time as slight constitutional disturbance as possible, as its characteristic features, is a method which would naturally commend itself to the profession.

It will be the aim of this paper to demonstrate by the results of a large number of cases that the treatment of compound fractures is best accomplished by adherence to three well-recognized and established principles.

1st. Absolute cleanliness.

2nd. Immediate fixation.

3rd. Provision for free drainage when necessary.

The treatment which has been employed for the most part in the cases to be reported is in brief as follows:

The patient having been taken to the operating theatre, is placed upon the table, and if the exigencies of the case demand, an anæsthetic is at once administered. Anæsthesia relaxes the muscles, affords the surgeon an opportunity to explore thoroughly the extent of the injury without inflicting pain. The injured limb is washed with soap and warm water and scrubbed well with a brush. The dirt, debris, and blood are thus removed, and the hair on the extremity is cleanly shaved, and then the limb is irrigated for a few moments with a solution of carbolic acid (1-40) or with a solution of corrosive sublimate (1-2,000) or with any other well-known disinfectant. Gentle traction is made upon the extremity, while at the same time counter-extension is employed with a view to bringing the broken fragments into coaptation. If the bones protrude through the wound and cannot be reduced without the exercise of too much violence, the projecting end is removed by a chain-saw. It has been my custom when the protruding bones cannot be reduced without the exercise of undue violence, to divide subcutaneously all tendons and thus overcome all resisting forces. This operation secures physiological rest during the repair of the fracture.

Attention now must be directed to the wound itself. Any loose fragments or spiculæ of bone are removed, except where they are adherent to periosteum, in which case these detached pieces are preserved, and they seldom exfoliate owing to the blood-supply through the periosteum. The interior of the wound is thoroughly irrigated by a syringe, or by a tube from an Esmarch's wound-douche. Having cleansed the limb, including even the fingers and toes, and having adjusted the fragments and having washed out and disinfected the interior of the wound, the application of a splint is now made. The limb is elevated, and under it are placed towels saturated in some disinfectant solution, which keeps the limb from coming in contact with the covering upon the operating-table, or from the opposite limb, or from any part of the body. If the wound is small a piece of surgically clean adhesive plaster is placed over the seat of fracture, and then collodion is painted over the plaster. If the wound communicating with the seat of fracture is too large to hermetically seal in the manner already described, a part of the wound can be closed by catgut suture, and a drainage-tube is introduced into the bottom of the wound. Decalcified bone drainage-tubes are used, as they seem to answer the purpose in the most satisfactory manner. Into the wound, and over, and around the wound is sprinkled a layer of iodoform and then over this any of the many differently prepared dressings, such as corrosive sublimate gauze, or Iodoform gauze, or absorbent cotton. The limb is now ready for the splint. A roller of Gamgee's absorbent cotton is heated which causes it to swell, and this is now made

to envelope the entire limb. Heating the cotton seems to permit it to expand, and any dressing, such as a plaster of Paris bandage, can be snugly applied over it, and the cotton will not lose its wonderful elasticity. During the application of the bandage, extension and counter-extension should be employed, the patient being at the same time well under the influence of ether. The bandage is now permitted to dry, and great care must be exercised while the bandage is drying, lest the patient while returning to consciousness, disturb the setting of the plaster and consequently the wound. The patient is placed in a suitable bed after the plaster of Paris bandage is firm. If there is no irritation or unpleasant sensation at the seat of fracture, if the toes or fingers are free from any numbness or cyanosis, if the respiration, pulse and temperature are normal, the first dressing is left undisturbed. In many cases the plaster of Paris bandage is worn until the fracture is repaired and primary intention has been obtained.

If, on the other hand, there is a slight irritation or unpleasant sensation at the seat of fracture, if the toes or fingers are numb or cyanotic, if the respiration, pulse and temperature are not normal, or if there are any other indications of disturbance, a fenestrum is cut over the site of the fracture, and the wound examined. Should the wound be inflamed and the tissues tense, the opening down to the fracture should be enlarged and the bottom of the wound washed out with a solution of bi-chloride of mercury or carbolic acid. The wound is now left to freely suppurate exposed to the air. The key-note to success under these conditions when suppuration is in process, is to keep the parts absolutely clean and pure from all contamination. A healthy granulating surface, secreting pure, rich, yellow, creamy pus is in itself a barrier to the entrance of septic absorption into the general system. If the granulations are weak and flabby, a poultice of flax-seed and carbolic acid placed over the wound for a few hours will stimulate the granulations. When the poultice is removed, some stimulating application may be employed with advantage, among which may be mentioned balsam of Peru, iodoform, powdered red cinchona bark, bismuth and oxide of zinc. These remedies seem to stimulate with greater efficiency when employed in alternation, as one remedy by continual application soon loses its efficacy. Absorbent cotton should be nicely packed in and around the fenestrum and changed whenever soiled. When a fenestrum exists, the limb can be suspended to great advantage in a Fluhrer's swing, which not only affords the patient great comfort, but permits the limb to be turned so as to allow free drainage from the open wound. When the leg, for example, is thus suspended, the patient can move about in bed, or even lie upon his side. If the inflammatory swelling is considerable, and other things denote that the splint is too tight, the plaster of Paris bandage is immediately cut down and the leg put into a fracture-box. This point cannot be too strongly impressed. Plaster of Paris can do irreparable mischief in a few hours, and for this reason, the splint should be sacrificed at once when there is the least suspicion of anything wrong. It has been my misfortune to have seen in the hands of a colleague two patients die from neglect to cut down the splint before it was too late. In both of these cases, gangrene was the cause of death. Plaster of Paris bandage in the treatment of fractures, properly and carefully applied, is the greatest boon. On the other hand, improperly or carelessly applied, it becomes a most potent source of evil. After the leg has been removed from the plaster of Paris bandage it should be put into a fracture-box. It is seldom the surgeon is required to do this; but occasionally, from some unknown cause, it becomes necessary. The fracture-box should be filled with oakum, or what is better, ordinary bran thoroughly soaked with carbolic acid, and then allowed to dry in the sun. This hint was given to me by Prof. Hamilton, whose reputation in the treatment of fractures is world-wide. When the limb is in proper condition, it should be again replaced in the plaster of Paris dressing, to remain until union has taken place. Great care should be taken to prevent any infiltration of pus or the formation of an abscess. Counter-openings should be promptly made whenever necessary.

Before entering upon a discussion in detail of this subject, it is well to define exactly what is meant by a compound fracture; for frequently surgeons report cases of simple fracture associated with a lacerated wound under the heading of compound fractures. The entrance of air to the seat of fracture is an essential condition to the formation of a compound fracture, and hence it is evident that the wound in the soft parts is produced by violence which is exercised from within, and finally, in a pathological sense, it is the presence of air that causes the great difference in the repair of simple and compound fractures. We know by microscopical investigations that in simple fractures, from the granulation tissue cartilage is formed, and that bone is developed from the cartilage—whereas in compound fractures no cartilage is formed, unless all suppuration is completely prevented. It is suppuration which prevents the development of cartilage. Hence it is evident that the processes of repair are different, and that, owing to the presence of air in the seat of fracture, additional dangers are unavoidably encountered.

In submitting these cases of compound fractures to this distinguished Association, I shall endeavor to prove that the success, which I may say has far exceeded my most sanguine expectations, is equal to that obtained by any other method. I shall demonstrate by referring to a large number of cases, that exposure of a fracture to the air whenever necessary, with proper precautions, is attended with no danger of decomposition or septic infection. I shall also establish the clinical fact that this plan of treating compound fractures has been unattended in a single case with non-union or with deformity. Finally, after showing that the mortality is no greater than by any other method, and that as regards shortening, deformity and non-union, the results are equally satisfactory, it still remains to prove that during the process of repair, there is no more constitutional disturbance than is present during healing by any other method. The solution of this most difficult

problem can only be obtained by a careful analysis and thorough examination of the daily charts, which record every twelve hours the pulse, respiration and temperature in each case. These charts are all here on the table for inspection and study. It will suffice to say that in dividing the entire number into thirds, in the first third two patients reached a temperature of 104 F. and one patient 104½ F. on only one occasion; but these three temperatures fell in a very short time to 100 F. Of the remaining number in the first third, ten cases reached a temperature of 103 F. and 102 F. respectively; but these temperatures were not elevated any length of time, and the charts show a gradual decrease to the normal standard. In the second third, no temperatures rose above 101 F. during the entire process of repair.

In the last third, the temperature never rose higher than 100 F. at any time, and in these cases the respiration, pulse and temperature were absolutely normal.

The following cases of compound fractures have been under my charge in Bellevue, St. Vincent, and the Ninety-ninth Street Reception Hospitals, in New York City, and also in private practice. Several cases are also included which have been previously published by myself in connection with another subject. From the list is excluded one case which terminated fatally, and I mention this case with the following explanation: The patient was a boy, who fell from the top of a high building, and sustained, as a result of the fall, three compound fractures, one of each thigh and one of the lower jaw.

The boy was treated by Dr. T. H. Manley, Assistant Surgeon to the Ninety-ninth Street Hospital during my absence in Europe, but I saw the case with him upon my return. The boy died from exhaustion, consequent upon profuse hæmorrhage, and the autopsy, which was conducted by Prof. W. H. Welch, failed to show any evidences of septicæmia, or blood-poisoning of any kind. While the case was not mine, I prefer to mention it with the others, because the patient was admitted into a hospital of which I am the attending surgeon. But the case was admitted to the hospital and to my wards during my vacation, and was under the charge of Dr. Manley, who, it may be said, treated this case, as well as many other cases of compound fracture, with unusual skill.

In Dr. Manley's case there was no evidence of blood-poisoning, notwithstanding the fact that his patient suffered from a double compound fracture of the thigh, and also one of the lower jaw. My report covers 144 cases of compound fractures which have occurred in succession. While it is impossible to describe in detail each of these 144 consecutive cases, I have arranged them in tables for publication. The charts of the cases are here upon the table for examination; also in these bottles are some 200 pieces of fragments of bone which have been removed in the cases of compound fractures of the skull and long bones. I shall take up in order the different varieties of fractures, and then give a summary. They are tabulated in the following order: Skull, thigh, leg, arm, forearm, lower jaw, hand and foot, miscellaneous fractures.

COMPOUND FRACTURES OF THE SKULL.

NO.	NAME.	AGE.	DATE.	INJURY.	TREATMENT.	RESULT.
I.	H. R.	49	Oct., 1883	Compound comminuted fracture of skull. Patient struck with a brick over frontal bone. Patient conscious. No paralysis.	Patient was trephined; 28 pieces of bone removed; wound washed out with carbolic acid water; wound left open.	Recovery
II.	R. O.	31	Jan., 1883	Compound comminuted fracture of skull, produced by kick of a horse; 2½ inches by 1½ inches was the size of wound. Patient unconscious.	Patient was trephined; 64 pieces of bone removed; wound left open to granulate. Irrigated with carbolic acid.	Recovery
III.	D. F.	28	May, 1883	Compound comminuted and depressed fracture of skull. Paralysis of arm; severe hæmorrhage. Stone fell from a height of 25 feet.	Trephined; 16 pieces of bone removed. Paralysis disappeared. Wound treated openly.	Recovery
IV.	A. H.	18	April, 1883	Depressed fracture, followed by persistent headache for 6 years. One pupil dilated. End of 6 months, after operation, no headache.	Trephined over fracture. Dura mater thickened. Pachy-meningitis externa. Headache disappeared. Wound open.	Recovery
V.	P. R.	40	February, 1883	Compound fissured fracture of skull.	Treated openly with carbolic acid balsam of Peru.	Recovery
VI.	B. C.	45	Jan., 1883	Compound fissured fracture of skull. Fracture extending several inches.	Treated openly; carbolic acid, balsam of Peru.	Recovery
VII.	M. D.	8	May, 1883	Boy struck with a pitcher. Compound fracture of skull, extending over a large area.	Treated openly; carbolic acid, balsam of Peru.	Recovery
VIII.	E. D.	34	Feb., 1884	Compound fracture of skull. Patient was struck with an axe. Fracture was punctured. Wound in scalp extensive. No symptoms.	Trephined because a punctured fracture. Removed 10 pieces of bone splintered off from internal table.	Recovery
IX.	G. C.	8	Jan., 1884	Caries and abscess mastoid portion of temporal bone. Strumous origin.	Trephined opened abscess. Gouged out carious bone. Balsam of Peru.	Recovery
X.	J. D.	30	Feb., 1883	Compound fracture of orbital plate of frontal bone. Gunshot injury.	Wound kept clean; washed with carbolic acid.	Recovery

COMPOUND FRACTURES OF THE SKULL—*Continued.*

NO.	NAME.	AGE.	DATE.	INJURY.	TREATMENT.	RESULT.
XI.	J. D.	53	Feb., 1884	Compound fracture of skull. Patient unconscious, and in profound shock.	Stimulants. Patient never rallied.	Died within 24 hours
XII.	U. S.	20	Oct., 1883	Compound fracture right zygoma. Fracture extending downward toward base.	Stimulants. Patient never rallied.	Died within 24 hours
XIII.	A. C.	24	May, 1883	Compound depressed fracture of skull.	Stimulants. Patient never rallied. Pulse scarcely perceptible.	Died within 6 hours
XIV.	G. H.	35	April, 1883	Compound fracture mastoid portion of temporal bone, result of gunshot injury.	Bullet and loose bone removed. Patient bled profusely.	Died within 48 hours
XV.	J. C.	62	May, 1882	Compound fracture frontal and nasal bones.	Wound washed. Nasal bones adjusted. Patient did well.	Recovery
XVI.	G. P.	35	Nov., 1883	Compound fracture of skull. Result of 3 pistol-shots.	Loose fragments removed, also bullet; wound cleansed.	Died within 24 hours
XVII.	T. D.	30	Sept., 1883	Compound fracture of frontal bone.	Wound cleansed; dressed with oakum and balsam of Peru.	Recovery
XVIII.	G. H.	20	April, 1882	Compound fracture of skull. Result of gunshot injury.	Stimulants. Patient never rallied.	Died within 24 hours
XIX.	J. L.	46	March, 1884	Compound punctured fracture of skull. Patient was struck by locomotive. Paralysis, etc.	Trephined. Removed 25 pieces of bone. Wound treated openly.	Recovery
XX.	J. K.	14	April, 1884	Compound depressed fracture skull (frontal bone). Dura mater lacerated. Brain substance protruded.	Trephined. Removed 8 large pieces; sewed up dura mater with catgut suture.	Recovery
XXI.	A. H.	23	Sept., 1882	Compound depressed fracture of skull. Patient in profound shock.	Trephined; 28 pieces removed.	Recovery
XXII.	J. H.	7	Sept., 1883	Compound depressed fracture.	Bones removed.	Recovery
XXIII.	T. C.	32	May, 1884	Double compound fracture of skull, also nasal bones. Struck by glass bottle.	Drainage-tube inserted; wound sewed up; no depression.	Recovery

This table shows twenty-three cases of compound fractures of the skull with no deaths except six, which occurred within forty-eight hours after injury, and which were due to shock. These patients never rallied from collapse and died from causes which could not have been prevented by any plan of treatment. Excluding then the six cases there remain 17 cases of Compound Fractures of the Skull in succession with no death, and of these seventeen consecutive and successful cases, ten of them were trephined. In two of the ten cases a disc of bone was removed for the purpose of elevating fragments. In the third case there were eight pieces of bone removed, in the fourth case ten pieces of bone were removed, and also the dura mater was torn and sewed up with catgut sutures. In the fifth case there were sixteen fragments removed, in the sixth case twenty-three fragments, in the seventh case twenty-five comminuted fragments, in the eighth case twenty-eight pieces, and in the ninth case sixty-four pieces, involving nearly the entire frontal bone, in the tenth case the mastoid cells were opened. Notwithstanding this series of compound fractures of the skull with paralysis, hæmorrhage, depression and compression, and all the other unfavorable symptoms, every case in order recovered.

COMPOUND FRACTURE OF THIGH.

NO.	NAME.	AGE.	DATE.	INJURY.	TREATMENT.	RESULT.
I.	P. P.	20	May, 1883	Compound fracture of thigh. Patient was caught between wall and elevator for two hours.	Wound washed; sealed; plaster Paris bandage immediately applied.	Recovery
II.	L. D.	25	Sept., 1876	Compound fracture of thigh. Knee joint opened; great shock.	Primary amputation of thigh. (Upper ⅓.)	Recovery
III.	J. B.	12	Nov., 1883	Medullary canal freely opened by free incision on both sides to remove sequestrum.	Esmarch applied; large wound made; considerable hæmorrhage.	Recovery

This table shows three cases of compound fracture of the thigh with no deaths. One case was a boy who was caught between an elevator and the wall and who was thus held for two hours before he could be extricated.

The second was a man who was injured in such a way as to require primary amputation.

The third case was that of a boy who sustained a simple fracture, and at the seat of fracture an abscess was developed. The medullary canal was freely opened by two long incisions and some pus and carious bone were removed.

COMPOUND FRACTURES OF THE LEG.

NO.	NAME.	AGE.	DATE.	INJURY.	TREATMENT.	RESULT.
I.	C. W.	20	Dec., 1883	Compound fracture leg. Tibia protruded, alarming hæmorrhage.	Plaster of Paris bandage applied at once. Cut down splint in six weeks. Union perfect.	Recovery
II.	R. H.	41	Aug., 1883	Compound fracture fibula. Contusions opposite leg.	Plaster of Paris bandage applied with a bracket.	Recovery
III.	R. M.	32	May, 1883	Compound fracture of leg.	Plaster of Paris bandage with fenestrum.	Recovery
IV.	W. E. M.	40	March, 1876	Compound fracture both bones. Tibia sawn off with chain saw.	Plaster of Paris bandage applied at once—with fenestrum.	Recovery
V.	† D.	50	Apr., 1883	Compound fracture of leg.	Plaster of Paris bandage applied.	Recovery
VI.	B. C.	30	Oct., 1882	Compound fracture of leg.	Plaster of Paris bandage applied with fenestrum.	Recovery
VII.	T. C.	24	Apr., 1883	Compound fracture of leg.	Plaster of Paris bandage applied.	Recovery
VIII.	J. B.	35	Dec., 1882	Compound comminuted fracture leg. Laceration of soft parts.	Amputation six inches below knee-joint. (Primary.)	Recovery
IX.	M. F.	26	Oct., 1882	Compound fracture both bones. Ankle-joint opened, great comminution.	Plaster of Paris bandage. Patient left hospital in two months with good limb.	Recovery
X.	M. R.	20	Dec., 1875	Compound comminuted both bones of leg. Extensive burns and laceration of soft parts.	Amputation. (Primary.)	Recovery
XI.	A. D.	14	Nov., 1882	Compound fracture, ankle joint opened. Bones protruded.	Plaster of Paris bandage applied. Leg was satisfactory after removing splint; joint useful; very little impairment.	Recovery
XII.	O. D.	34	Jan., 1876	Compound fracture of leg. Great laceration of soft parts.	Amputation. (Primary.)	Recovery
XIII.	W. C.	24	Aug., 1883	Compound comminuted fracture of foot and ankle.	Amputation. (Secondary.)	Recovery
XIV.	F. McC.	24	Oct., 1882	Compound fracture of leg and simple fracture of thigh.	Plaster of Paris bandage applied to leg and thigh.	Recovery
XV.	T. M.	30	Aug., 1883	Compound fracture both bones of leg. Longitudinal fracture.	Plaster of Paris bandage applied.	Recovery
XVI.	T. S.	40	June, 1878	Compound fracture of leg. Result of a heavy stone falling upon the leg.	Plaster of Paris bandage applied immediately.	Recovery
XVII.	J. A.	30	Apr., 1883	Compound fracture of leg.	Plaster of Paris bandage applied.	Recovery
XVIII.	M. M.	22	Oct., 1882	Compound fracture of leg.	Plaster of Paris bandage applied. Fenestrum.	Recovery
XIX.	J. B.	34	Oct., 1883	Compound fracture of leg.	Plaster of Paris bandage applied.	Recovery
XX.	A. M.	34	Oct., 1875	Compound fracture of leg.	Amputation of leg. (Primary.)	Recovery
XXI.	R. W.	46	Dec., 1875	Compound fracture of leg. Ankle-joint involved.	Amputation at knee-joint. (Secondary.)	Recovery
XXII.	T. M.	12	Nov., 1875	Compound fracture of leg. Ankle-joint opened.	Amputation. (Primary.)	Recovery
XXIII.	J. B.	56	Apr., 1884	Compound fracture of head of tibia. Knee-joint filled with blood.	Plaster of Paris bandage applied. Good movement in joint; result satisfactory.	Recovery
XXIV.	T. T.	40	Oct., 1883	Compound comminuted fracture tibia. Ankle-joint involved.	Plaster of Paris bandage applied.	Recovery
XXV.	T. T.	40	March, 1876	Compound fracture of tibia and fibula.	Amputation. (Primary.)	Recovery
XXVI.	T. T.	40	Feb., 1884	Compound fracture of head of tibia, knee-jnint implicated.	Plaster of Paris bandage. The joint was anchylosed.	Recovery
XXVII.	D. B.	35	March, 1884	Compound fracture of leg.	Plaster of Paris bandage applied.	Recovery
XXVIII.	T. M.	38	March, 1876	Compound fracture of leg.	Amputation. (Primary.)	Recovery
XXIX.	D. C.	24	Sept., 1883	Compound fracture of foot.	Amputation, (Primary.)	Recovery
XXX.	R. S.	20	Apr., 1883	Compound fracture of leg.	Plaster of Paris bandage applied.	Recovery
XXXI.	J. B.	40	Feb., 1883	Compound fracture involving knee-joint.	Plaster of Paris bandage applied. Knee anchylosed.	Recovery
XXXII.	P. Mc. K.	50	Feb., 1883	Compound fracture of leg.	Plaster of Paris bandage applied.	Recovery
XXXIII.	F. C.	31	Aug., 1883	Compound fracture of leg; kicked by a horse.	Plaster of Paris bandage applied. (Bracket.)	Recovery
XXXIV.	T. E.	40	March, 1876	Compound fracture of both bones of leg.	Amputation. (Primary.)	Recovery

COMPOUND FRACTURES OF THE LEG—*Continued.*

NO.	NAME.	AGE.	DATE.	INJURY.	TREATMENT.	RESULT.
XXXV.	J. L.	45	Sept., 1883	Compound fracture of tibia and fibula.	Plaster of Paris bandage applied.	Recovery
XXXVI.	M. McC.	35	Aug., 1883	Compound fracture of leg.	Plaster of Paris bandage applied.	Recovery
XXXVII.	M. B.	35	Aug., 1880	Compound fracture of leg.	Plaster of Paris bandage applied.	Recovery
XXXVIII.	G. W.	18	Dec., 1883	Compound fracture of leg; alarming hæmorrhage.	Plaster of Paris bandage applied.	Recovery
XXXIX.	D. B.	30	Jan., 1876	Compound fracture of leg.	Placed in fracture-box with extension.	Recovery
XL.	W. W.	40	April, 1883	Compound fracture both tibia and fibula. Longitudinal fracture.	Plaster of Paris bandage applied with large fenestrum.	Recovery
XLI.	J. D.	50	Nov., 1883	Sequestrotomy. Medullary canal freely opened, with large wound.	Wound packed with strips of sheet lint.	Recovery
XLII.	T. M.	30	April, 1884	Sequestrotomy. Medullary canal of femur freely opened for 4 inches.	Wound packed with jute and Balsam of Peru poured into wound.	Recovery
XLIII.	G. R.	26	Feb., 1884	Compound dislocation ankle-joint; wound 5 inches long; foot right angles to leg.	Plaster of Paris bandage. Leg suspended in a swinging apparatus.	Recovery
XLIV.	J F.	45	June, 1881	Compound fracture of patella and lower end of femur.	Fragments removed. Plaster of Paris bandage applied.	Recovery
XLV.	P. D.	38	Oct., 1883	Compound comminuted fracture of tibia and fibula; also opposite ankle opened.	Stimulants administered.	Died within 14 hours
XLVI.	J. H.	30	May, 1884	Compound comminuted fracture of tibia and fibula, foot also crushed.	Stimulants administered.	Died within 12 hours
XLVII.	J. M.	30	May, 1884	Compound fracture of tibia and fibula.	Plaster of Paris bandage applied. No fenestrum.	Recovery
XLVIII.	B. McN.	35	May, 1884	Compound comminuted fracture of leg, both bones; 10 fragments.	Plaster of Paris bandage applied. Fenestrum cut.	Recovery
XLIX.	B. McN.	35	May, 1884	Compound comminuted fracture of tibia and fibula. This patient had both bones of both legs fractured.	Plaster of Paris bandage applied; fenestrum cut.	Recovery
L.	E. H.	30	Aug., 1883	Compound fracture opening into ankle-joint. All tendons exposed. Fracture astragalus.	Plaster of Paris bandage applied; fenestrum cut; slight movement in joint.	Recovery
LI.	E. W.	25	Nov., 1883	Compound fracture tibia and fibula.	Plaster of Paris bandage applied.	Recovery
LII.	H. C.	14	Oct., 1883	Compound fracture. Medullary cavity of bone opened to remove sequestrum.	Wound left open; simple dressing applied.	Recovery
LIII.	J. S.	53	Sept., 1883	Compound fracture of tibia and fibula.	Plaster of Paris bandage applied.	Recovery
LIV.	B. F.	15	May, 1884	Compound fracture tibia and fibula. Originally simple. Soft parts sloughed.	Plaster of Paris bandage applied immediately. Fenestrum cut.	Recovery
LV.	M. C.	52	May, 1884	Compound fracture of the tibia. End of bone protruded.	Plaster of Paris bandage applied. No fenestrum.	Recovery
LVI.	J. O. D.	42	May, 1884	Compound fracture of the tibia and fibula. Wound one and a half inch. Patient fell from a high tree.	Plaster of Paris bandage applied.	Recovery
LVII.	B. G.	30	May, 1884	Compound fracture of Leg. Fibula alone compound. Patient was struck by policeman's club while under arrest.	Plaster of Paris bandage immediately applied.	Recovery
LVIII.	J. Z.	40	May, 1884	Compound fracture of right leg; large wound. Comminuted fracture left leg; large wound extending up under patella; left arm broken; fell four stories.	Three plaster of Paris bandages at once applied. Patient had delirium tremens and was shackled. Is living while going to press, after 3 weeks.	Recovery

This table shows fifty-eight cases of compound fractures of the leg, all of which recovered, except two which died from shock within twelve hours after admittance into the hospital. In many of the cases the bones protruded through the wound and in three of these cases it was necessary to saw off with the hain-saw several inches of the projecting ends. Two of the cases were longitudinal fractures of the tibia splitting the long bone into halves. In these longitudinal fractures a horse-shoe tourniquet was applied, a device of my own as far as I know, to keep the long fragments in contact with each other. In a few cases a compound fracture was made, but no case is recorded where at least the end of the finger was

not introduced well into the medullary canal of the tibia or femur. Ten of the cases opened into the knee and ankle-joints. In a few the hæmorrhage was a very formidable symptom. One case was a double compound fracture of both bones of both legs. The wounds were large in both legs and in both legs several large pieces of bone were removed, amounting to four inches in one leg and three inches in the other leg. Considering the fact that the patient received a double compound fracture, that the wounds were large, that the loose pieces of bone were many, that the hæmorrhage was alarming, and that the patient not only recovered, but was out of bed sitting up in a chair upon the fourteenth day, without a bad symptom, it is one of the most remarkable cases ever published by any surgeon in this category. In another case there were two legs and one fore-arm fractured with a wound extending up under the patella. Patient jumped from the roof of a four-story building with intent to kill.

COMPOUND FRACTURES OF THE ARM.

NO.	NAME.	AGE.	DATE.	INJURY.	TREATMENT.	RESULT.
I.	U. P. R.	20	April, 1883	Compound fracture of humerus, result of a gunshot injury.	Plaster Paris bandage applied.	Recovery
II.	A. M.	12	April, 1883	Compound fracture of humerus.	Plaster of Paris bandage applied.	Recovery
III.	M. D.	22	May, 1883	Compound fracture of carpal bones opening into wrist-joint, laceration of muscles, fore-arm and radial artery.	Amputation few inches below shoulder-joint during gangrene. (Secondary.)	Recovery
IV.	J.W.	16	May, 1883	Compound fracture of humerus, near shoulder-joint.	Plaster of Paris bandage applied.	Recovery
V.	D. D.	20	May, 1883	Compound fracture of humerus, near shoulder-joint.	Plaster of Paris bandage. Fenestrum cut.	Recovery
VI.	H. C.	35	May, 1883	Compound fracture of humerus, near shoulder-joint, result of a flag-staff falling upon patient from a height of 60 feet.	Plaster of Paris bandage applied.	Recovery
VII.	T. McD.	13	Sept., 1883	Compound fracture of humerus.	Plaster of Paris bandage applied.	Recovery
VIII.	J. H.	11	Aug., 1883	Compound fracture of humerus. Elbow-joint opened, bones protruded, serious hæmorrhage.	Plaster of Paris bandage applied.	Recovery
IX.	J. N.	30	May, 1884	Wired an un-united fracture; bones exposed and fragments sawn off.	Plaster of Paris bandage applied with fenestrum union.	Recovery
X.	J. T.	28	April, 1884	Gunshot fracture of head of humerus. Ball extracted.	Splint applied. Drainage-tube used.	Recovery
XI.	J. G.	30	Dec., 1883	Wired an un-united fracture humerus, near shoulder-joint.	Plaster of Paris bandage applied.	Recovery
XII.	B. B.	4	May, 1884	Compound fracture of humerus. Child fell from a 4-story building, also depressed fracture of skull with convulsions. Fracture of skull not compound.	Plaster of Paris bandage applied. Wound admitted the finger.	Recovery

This table records twelve cases of compound fracture of humerus. All of which recovered. In those cases where the joints were involved, recovery took place with little impairment in movement of the joint. One of the twelve cases, involved also the wrist-joint; another the elbow-joint, and another the shoulder-joint. Two of the cases were the result of gunshot injuries. These cases then of the arm were all of a serious character. In one of the cases of compound fracture of the humerus, there was a depressed fracture of the skull in a child. The patient had convulsions, but these disappeared when the overlapping was replaced and the indentation was rectified.

COMPOUND FRACTURES OF THE FORE-ARM.

NO.	NAME.	AGE.	DATE.	INJURY.	TREATMENT.	RESULT.
I.	J. W.	12	Oct., 1882	Compound comminuted fracture of radius and ulna.	Plaster of Paris bandage applied.	Recovery
II.	L. S.	14	May, 1883	Compound fracture wrist-joint. Opened, tendons torn and divided.	Amputation of fore-arm. (Primary.)	Recovery
III.	J. G.	20	March, 1875	Compound fracture radius and ulna opening into elbow-joint.	Amputation of arm. (Primary.)	Recovery
IV.	D. H.	20	May, 1883	Compound fracture of radius and ulna.	Amputation circular flap. (Primary.)	Recovery
V.	G. H.	20	Aug., 1883	Compound comminuted fracture of radius.	Plaster of Paris bandage applied.	Recovery
VI.	T. McC.	20	April, 1883	Compound fracture of ulna.	Plaster of Paris bandage. Patient had an attack of erysipelas. Patient admitted into ward with facial erysipelas.	Recovery

COMPOUND FRACTURES OF THE FORE-ARM—*Continued.*

NO.	NAME.	AGE.	DATE.	INJURY.	TREATMENT.	RESULT.
VII.	A. S.	24	May, 1883	Compound fracture of fore-arm; gangrene; vessels divided.	Amputation. (Secondary.)	Recovery
VIII.	J. O. B.	42	June, 1883	Compound comminuted fracture of radius and ulna with extensive burns.	Stimulants.	Died within 24 hours
IX.	J. B.	10	April, 1883	Compound fracture. Radius and ulna, bones protruded.	Wound washed out; 1-40 solution carbolic acid; splint.	Recovery
X.	C. H.	40	April, 1883	Compound comminuted fracture of radius and ulna. Extensive laceration.	Wound irrigated; carbolic acid; several kinds of splints applied.	Recovery
XI.	G. T.	30	Sept., 1882	Compound comminuted fracture of fore-arm with laceration of tendons.	Amputation. (Primary.)	Recovery
XII.	H. T.	13	May, 1884	Compound comminuted fracture of radius and ulna.	Plaster of Paris; no fenestrum; patient about ward.	Recovery
XIII.	J. N.	19	May, 1884	Compound comminuted fracture into wrist joint. Radius fractured.	Dressed with wooden splint and irrigation.	Recovery
XIV.	M. McD.	28	May, 1884	Compound comminuted fracture meta-carpal bone, also styloid process of radius; joint opened wide and filled with persulphate of iron before admittance.	Plaster of Paris bandage.	Recovery

This table records fourteen cases of compound fractures of the fore-arm, all of which recovered except one case, which died from shock within twenty-four hours, and which had in addition to his fracture severe burns of the 1st, 2d and 3d degrees. Of the remaining thirteen cases, three of them opened into the wrist-joint and one into the elbow-joint.

COMPOUND FRACTURES OF THE LOWER JAW.

NO.	NAME.	AGE.	DATE.	INJURY.	TREATMENT.	RESULT.
I.	R. B.	21	June, 1883	Compound fracture lower jaw, produced by kick of a horse.	Wound enlarged and cleaned. The fragments were united by silver wire.	Recovery
II.	M. P.	28	June, 1883	Compound fracture lower jaw, result of a blow.	Wound cleansed and enlarged. Fragments sutured by silver wire.	Recovery
III.	F. F.	14	Sept., 1883	Compound fracture upper and lower jaw, also simple fracture of thigh. Fall of 80 feet.	Retentive apparatus. Plaster of Paris to thigh.	Recovery
IV.	A. H.	55	Aug., 1883	Compound fracture lower jaw at dental foramen. Two teeth wedged in between fragments.	Barton's splint. Mouth washed every few hours with carbolic acid and water.	Recovery
V.	H. W.	30	May, 1883	Double compound fracture of lower jaw.	Barton's bandage applied, also a cork between the two rows of teeth	Recovery
VI.	F. F.	12	Sept., 1883	Compound fracture of lower jaw, simple fracture of thigh, also tibia and fibula.	Retentive apparatus to jaw, also a cork. Plaster of Paris to thigh and leg.	Recovery
VII.	J. F.	20	June, 1883	Compound fracture of lower jaw.	Retentive apparatus, also cork. Mouth rinsed out at frequent intervals.	Recovery
VIII.	S. M.	25	Dec., 1875	Compound fracture of lower jaw. Great displacement. Kicked by a vicious horse.	Patient was placed under ether to reduce the fragments. A leather splint applied also.	Recovery
IX.	F. W.	14	May, 1884	Pistol shot injury upper jaw.	Wound scaled.	Recovery

This table shows nine cases of compound fractures of the lower and upper jaws, in all of which the injuries were of a severe character. In two of the nine cases the fragments were reduced and silver sutures were introduced to keep the fragments in coaptation. In two of the remaining seven, the thigh was fractured in addition to the compound fracture of the jaw, and the leg was also fractured in one of the two cases just mentioned. One case was a pistol-shot wound of superior maxilla with comminution of the fragments.

COMPOUND FRACTURES OF THE FINGERS AND TOES.

NO.	NAME.	AGE.	DATE.	INJURY.	TREATMENT.	RESULT.
I.	W. F. K.	44	May, 1883	Lacerated and contused wound of foot produced by a loaded truck passing over foot causing compound comminuted fracture.	Foot bandaged to wooden splint; treated openly; balsam of Peru.	Recovery
II.	M. K.	20	May, 1883	Compound comminuted fracture meta-carpal bones. Amputation part of hand.	Treated openly; hand on Palmar splint.	Recovery
III.	W. K.	24	May, 1883	Compound fracture of all toes, joints of meta-tarsus opened. Gangrene.	Splint; toes allowed to granulate; balsam and other stimulating applications employed.	Recovery
IV.	R. G.	20	Feb., 1883	Compound fracture of fingers. Contusions.	Primary amputation of injured part.	Recovery
V.	T. C.	16	Sept., 1883	Compound fracture of middle phalanx.	Wooden splint; treated openly to granulate.	Recovery
VI.	C. H. P.	42	Sept., 1882	Compound dislocation; joints all open; circular saw injury.	Amputation middle finger; conservative treatment in other fingers.	Recovery
VII.	J. H.	30	May, 1883	Compound comminuted fracture of phalanges.	Wooden splint; wound treated openly to granulate.	Recovery
VIII.	R. G.	16	Sept., 1883	Compound comminuted fracture 1st 2d and 3d fingers; tendons torn; lacerated wound.	Primary amputation; healed by granulation.	Recovery
IX.	A. R.	20	May, 1883	Compound comminuted fracture meta-tarsal bone. Railway car wheels passed over foot; wound 4 inches in length to tarsal bones.	Wooden splint; treated openly; allowed to granulate, useful foot.	Recovery
X.	J. H.	22	Dec., 1875	Compound fracture of meta-tarsal bone.	Wooden splint; wound treated openly; good result.	Recovery
XI.	J. M.	27	April, 1880	Compound fracture of toes.	Wooden splint, jute, balsam, treated openly.	Recovery
XII.	S. H.	60	Sept., 1882	Compound fracture of meta-tarsal bones.	Wooden splint, jute, balsam, treated openly.	Recovery
XIII.	J. M.	18	Sept., 1883	Compound comminuted fracture toes.	Wooden splint, jute. Balsam of Peru; treated openly.	Recovery
XIV.	J. C. H.	45	Sept., 1883	Compound comminuted fracture fingers.	Wooden splint. Balsam of Peru; treated openly.	Recovery
XV.	P. McV.	52	April, 1884	Compound comminuted fracture toes. Foot badly crushed. Patient had a bad bed-sore.	Wooden splint. Balsam and iodoform; treated openly.	Recovery
XVI.	J. R.	16	April, 1884	Compound fracture thumb and meta-carpal bone.	Primary amputation. Wound healed nicely.	Recovery
XVII.	J. O. B.	30	April, 1884	Compound fracture of great toe; foot contused.	Plantar wooden splint; jute, iodoform; treated openly.	Recovery
XVIII.	J. L.	65	May, 1882	Compound fracture meta-tarsal bone, and compound dislocation of great toe.	Wooden splint; iodoform, jute; treated openly.	Recovery
XIX.	M. C.	14	May, 1882	Resection and gouging os-calcis; large wound opening on both sides of foot.	Plaster of Paris bandage applied; fenestrum cut; treated openly.	Recovery
XX.	J. F.	21	May, 1884	Compound comminuted fracture of fingers; amputation of one finger, the remaining left to granulate.	Wooden splint; simple dressings.	Recovery
XXI.	J. C.	45	May, 1884	Compound fracture of three fingers; amputation of one finger.	Wooden splint; simple dressings.	Recovery

Here are 21 compound fractures of the hand and foot. All of these cases were complicated by great crushing and laceration of the soft parts, produced by railway injuries, circular saws, or by the falling of heavy weights. The joints were opened, and the bones were comminuted, the tendons exposed and the soft parts badly lacerated and contused. Although these compound fractures, on account of the peculiar nature of the accidents, were troublesome to treat, I shall in accordance with writers in general, exclude these twenty cases from the final list, remarking, however, that they all recovered.

There are twelve miscellaneous fractures which were compound, and some complicated with other injuries. Eight of the cases were of the lower and upper jaw, and were all serious injuries. Four were of the ribs and nasal bones. All of these compound fractures recovered. I have inserted these compound fractures because they have been more troublesome to treat, and have given me greater anxiety than the other fractures.

Finally, to recapitulate, there are in all 144 cases of compound fractures, of which number 23 are of the skull, 3 are of the thigh, 58 are of the leg, 12 are of the arm, 14 are of the fore-arm, 9 are of the upper and lower jaws, 21 are of the hand and foot, 4 are of the ribs and nasal bones. Total—144.

COMPOUND FRACTURES OF RIBS AND NASAL BONES.

NO.	NAME.	AGE.	DATE.	INJURY.	TREATMENT.	RESULT.
I.	T. B.	33	Sept., 1883	Compound fracture of two ribs, with considerable hæmorrhage.	Wound cleansed; adhesive plaster applied, and collodion, opium.	Recovery
II.	J. T.	30	Aug., 1882	Compound fracture nasal bones, with displacement and hæmorrhage.	Fragments reduced, and simple dressing applied.	Recovery
III.	M. T.	65	April, 1884	Compound fracture of nasal bones; two wounds leading down to fracture; severe hæmorrhage and shock.	Wound cleansed; fragments reduced; wounds sealed.	Recovery
IV.	J. A.	45	Dec., 1878	Compound fracture nasal bones; result of a blow from a heavy club.	Fragments reduced, which were comminuted; wound cleansed.	Recovery

Now following the example of surgical writers, who have carefully tabulated the results of treatment in compound fractures, I shall eliminate all those cases in which primary amputations were performed, because they do not concern the point at issue, but add the important fact that all the cases upon which any amputation was performed in compound fractures recovered without an exception; and, I shall also, according to the practice of all writers, reject all those cases which died of hæmorrhage, collapse, shock, etc., within forty-eight hours, although most of cases died within a few hours after injury. I shall also leave out all those cases of compound fractures of the hand and foot, remarking, however, that all these cases recovered and the results are as follows:

Deducting 21 cases of compound fractures of the hand and foot, and 14 cases of primary amputations, and 9 deaths which occurred within 48 hours or less from shock, there remain 100 consecutive, and of course unselected compound fractures, occurring in three large metropolitan hospitals without a death.

I have still other successful cases with which to begin my second series of one hundred cases of compound fractures, and I hope to report these cases at a future meeting of this Association.

In conclusion, gentlemen, let us compare the results of the treatment of compound fractures by the simple, open method already described, with that obtained by the true Listerian method.

In the *Boston Medical and Surgical Journal*, Hodges reports 19 cases of compound fractures treated strictly according to Lister's method with no deaths.

Lo Grasso reports 25 cases of compound fractures treated by Albanese under strict Listerian method with no deaths. Black, in the *Edinburgh Medical Journal*, reports eight cases of compound fractures treated *a la* Lister with no deaths.

Sir William McCormac reports 16 cases without a death, and refers to his 45 cases of compound fracture in St. Thomas' Hospital, which fractures were made by the surgeon. Vollkman reported at the International Congress, in London, 75 cases of compound fractures treated under the most rigid Listerian method without a death. These cases are reported by different surgeons throughout the world as the results obtained by a rigid adherence to the Listerian method. The results are brilliant beyond description. Sir Joseph Lister reports in his list 97 cases with two deaths.

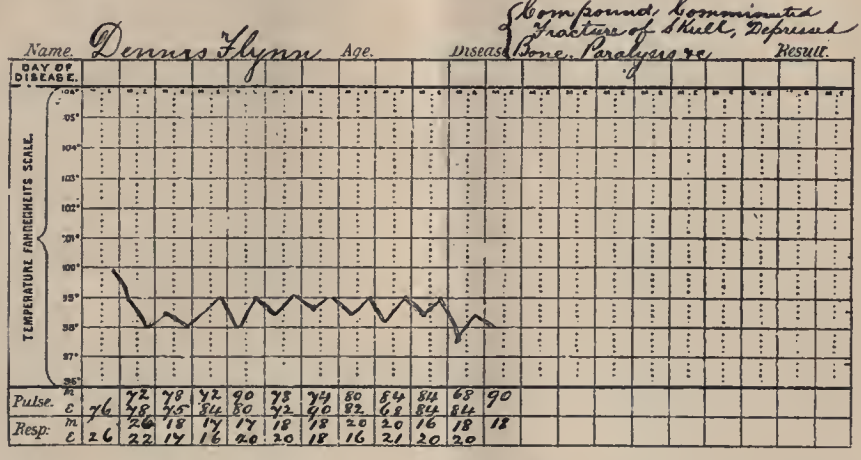
Finally, in *Billroth und Luecke Deutsche Chirurgie*, published in 1882, in Lieferung 27, 1. Hälfte, is a most exhaustive treatise on fractures by Prof. Dr. P. Burns. He has made a table of compound fractures in which there is an analysis of 254 cases which were treated by Listerian method. Of these 254 cases, 224 cases were treated conservatively, (*i. e.*, without interference by operation or resection, etc.) and 30 were obliged to submit to amputation or resection. Of the 224 treated conservatively, 14 died, and of the 30 operated upon, 9 died, making a total of 23 or 9 per centum of all the cases from all causes. Excluding such cases of deaths which occurred from causes entirely disconnected with any plan of treatment; (e.g.) collapse, fat embolism, hæmorrhage from rupture of the liver, each 1, delirium tremens 7, tetanus 2; there remain 11 cases, which died of septo-pyæmia, a percentage of 4.3 (four and three-tenths). Owing to 2 of these 11 cases having manifested general septic infection before they came under treatment, they may for statistical purposes be eliminated, thus giving a mortality of 9 or 3.5 per centum, (three and five-tenths.)

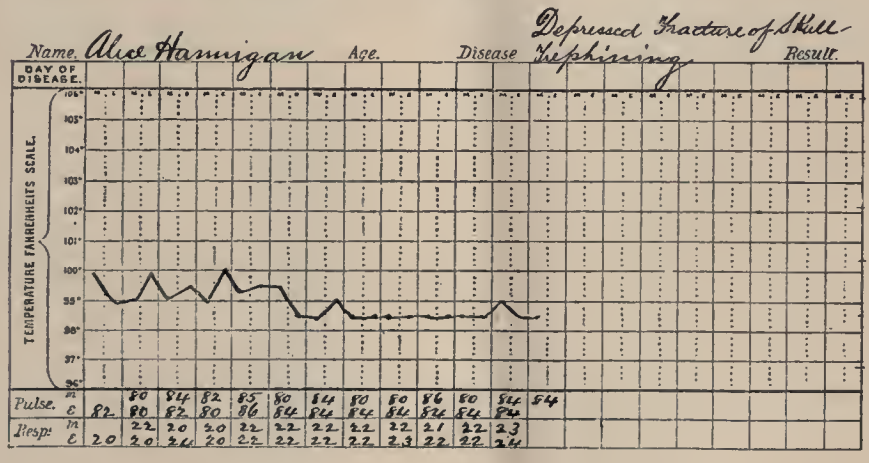
To make a summary, there were 254 cases of compound fractures, and excluding the deaths not connected with the plan of treatment, there is a death-rate of 3.5 per centum from septo-pyæmia.

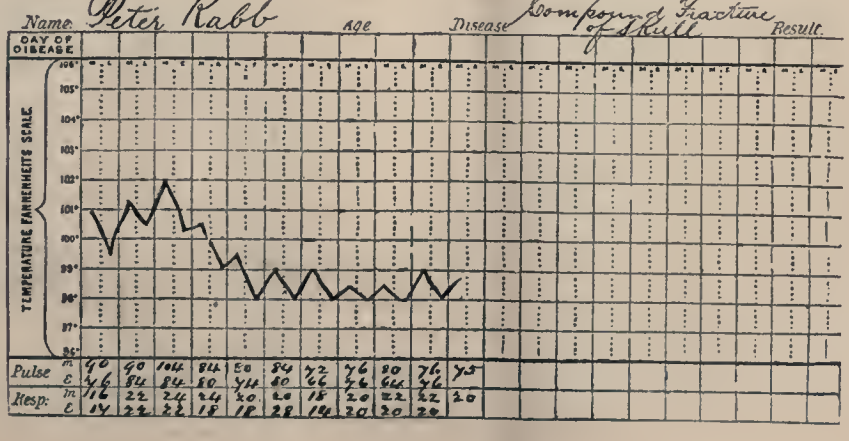
The results obtained by this simple and uncomplicated method which can be employed by any one without the ready facilities of a hospital, or by any one who has no opportunity to obtain special dressings, compare most favorably with any statistics yet published. In bringing these 144 cases before the meeting of the American Medical Association, and in offering them as a clinical contribution, I do not wish it to be understood that I under-value antiseptic surgery. On the contrary, I am a great advocate for, and believer in, those principles of antiseptic surgery, which have been so emphatically enunciated by the renowned Lister. I only contend that the same results can be obtained by other and simpler methods, which are within the reach of all. The aim of this paper is to maintain that cleanliness is the *sine qua non* for surgical success, and that wounds and compound fractures can repair kindly and quickly without danger though exposed to the air. The open treatment of wounds of a certain character is after all the highest type of antiseptic surgery. These serious wounds will heal kindly when the surgeon acts well his part. There are certain wounds and

certain injuries which repair best without primary intention, although I obtain primary intention in osteotomies, in the major amputations, in excision of large tumors and other capital operations. I believe thoroughly in the germ theory, but I contend that these germs are for the most part harmless unless a wound is foul and unhealthy, for which condition the surgeon should hold himself responsible. The presence of air *per se* in a wound will excite no dangerous complication unless the wound is in an unhealthy condition. If the surgeon affords nature her prerogative and acts his part, there is no reason why a wound, and especially a compound fracture, should not repair kindly, quickly and satisfactorily.

In conclusion I invite your attention to some of the temperature charts which I have selected at random from the entire number which lie before you upon the table. They are all here for your examination.







Name. Michael Davis Age. Disease. Compound Fracture of Skull Result.

DAY OF DISEASE.

TEMPERATURE FAHRENHEIT'S SCALE.

Pulse.	m	125	90	102	92	108	90	90	108	90	90	95	72
	ε	96	88	90	96	84	82	84	84	82	85	90	68
Resp.	m	29	20	22	20	22	24	18	18	18	18	18	18
	ε	32	20	18	20	20	20	20	20	18	22	22	22

Name. Bridget Conolly Age. Disease. Compound Fracture of Skull Result.

DAY OF DISEASE.

TEMPERATURE FAHRENHEIT'S SCALE.

Pulse.	m	105	108	100	102	95	92		
	ε	96	86	90	90	85			
Resp.	m	24	24	26	26	26	22	21	20
	ε	24	26	26	24	23	23	24	

Name. Thomas Patterson Age. Disease. Compound Fracture of Thigh with contusion of opposite thigh Result.

DAY OF DISEASE.

TEMPERATURE FAHRENHEIT'S SCALE.

Pulse.	m	72	90	95	95	102	102	82	82	92	92	90	90	96	92	90	96	84	86
	ε	96	95	90	96	96	96	86	86	96	98	86	96	86	90	98	90	100	108
Resp.	m		23	20	23	20	24	23	18	18	23	22	22	24	23	23	23	24	24	20
	ε	26	20	23	20	23	18	20	20	20	20	22	20	22	22	22	22	23	23	

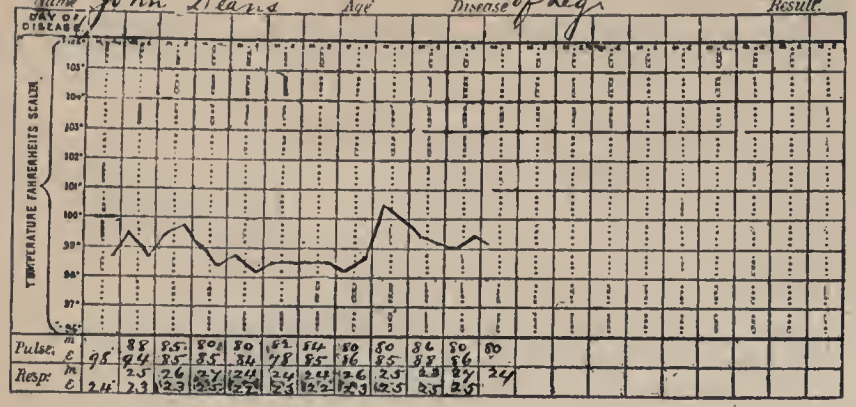
Name. Hugh Reiley Age. Disease. Compound Comminuted Fracture of Skull. 20 pieces of Bone removed. Result.

DAY OF DISEASE.

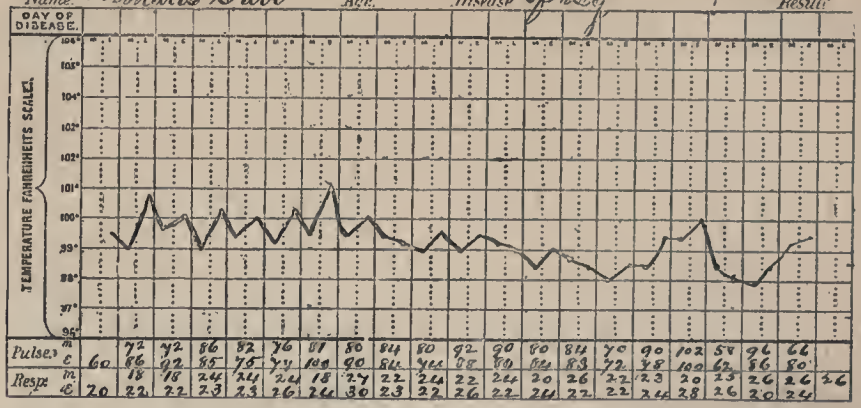
TEMPERATURE FAHRENHEIT'S SCALE.

Pulse.	m	66	76	76	77	72	73	73	71	75	72	75	75	75	75	75			
	ε	66	72	76	68	75	72	72	75	71	75	72	75	75	75	72			
Resp.	m	20	20	23	23	22	23	22	23	23	23	25	23	23	23				
	ε	24	23	22	25	23	22	22	21	21	23	24	25	23					

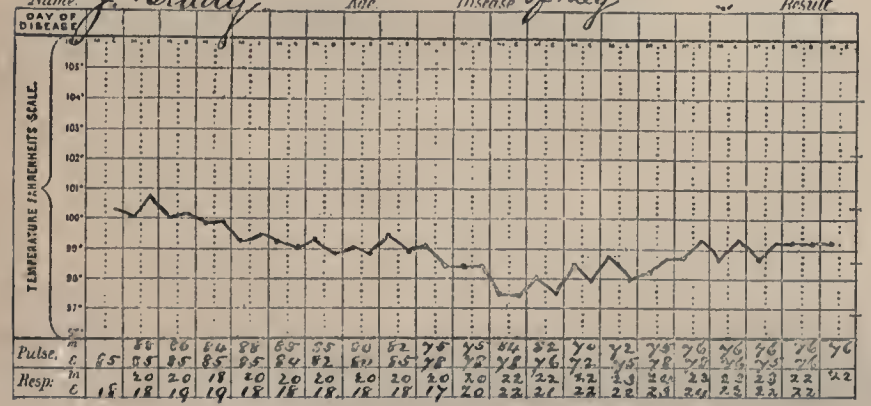
Name John Deans Age Disease Compound Fracture of Leg Result



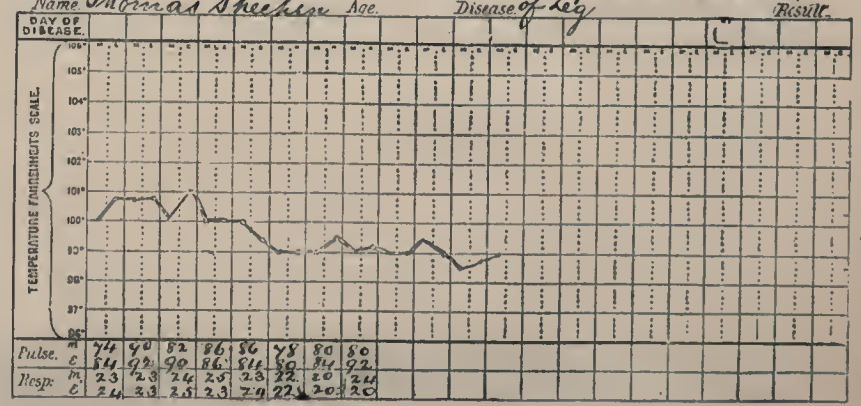
Name Bernardi Carr Age Disease Compound Fracture of Leg Result

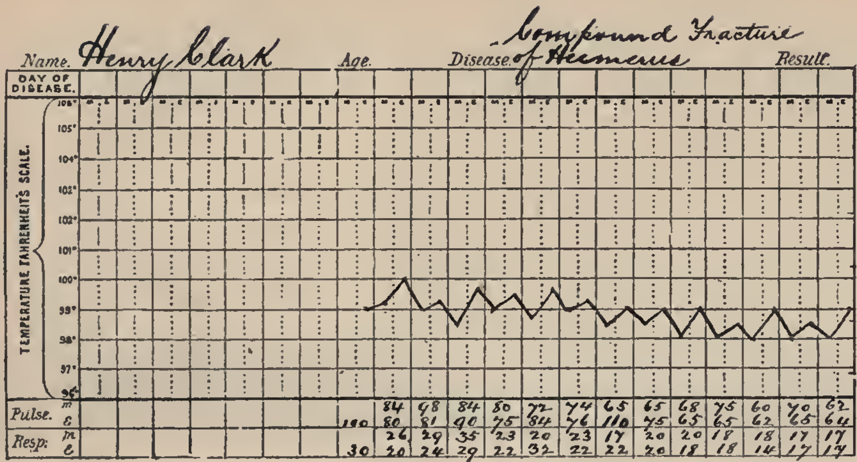


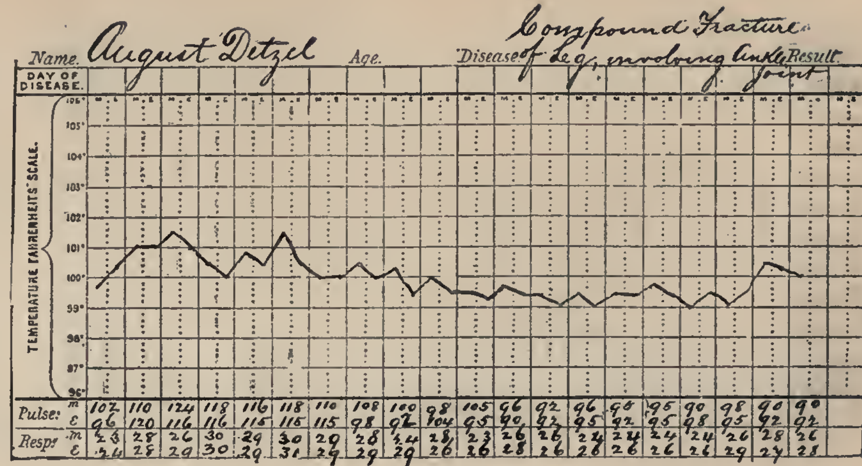
Name J. Brady Age Disease Compound Fracture of Leg Result

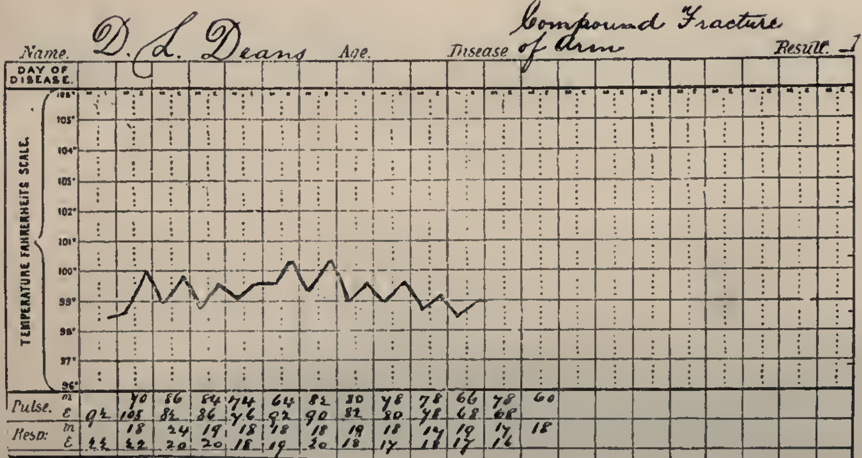


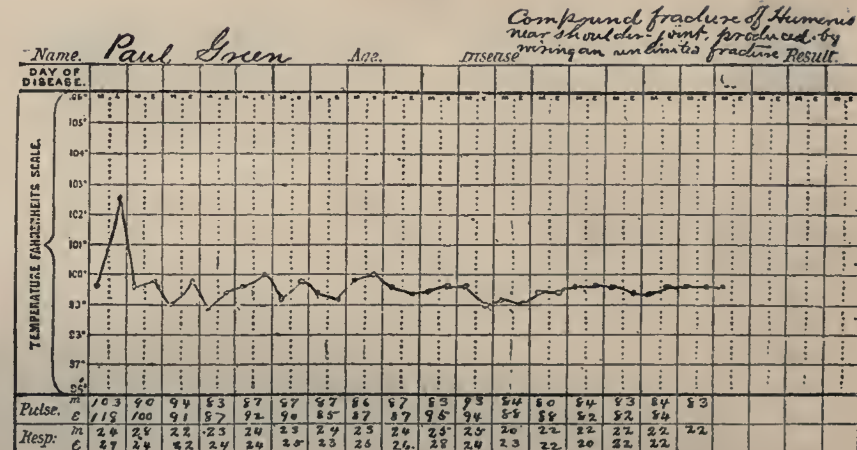
Name Thomas Sheehan Age Disease Compound Fracture of Leg Result

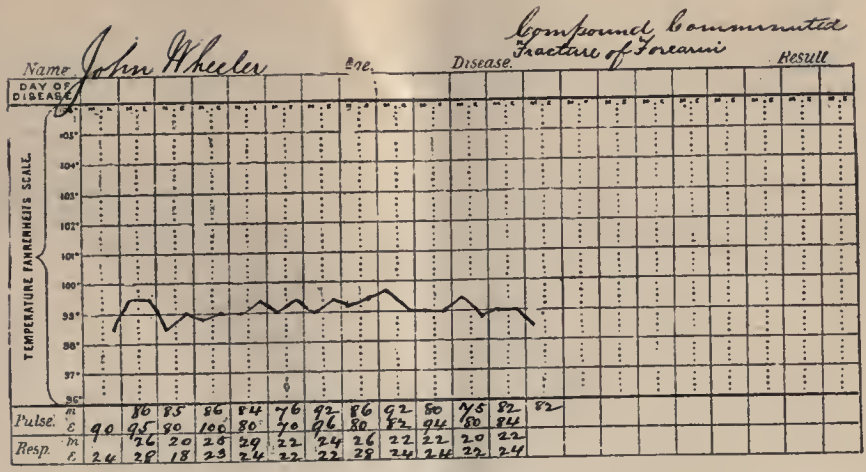



Name. Henry Clark
Age.
Disease. Compound Fracture of Humerus
Result.
DAY OF DISEASE.
TEMPERATURE FAHRENHEIT'S SCALE.
Pulse.
Resp.


Name. August Detzel
Age.
Disease. Compound Fracture of Leg, involving Ankle Joint
Result.
DAY OF DISEASE.
TEMPERATURE FAHRENHEIT'S SCALE.
Pulse.
Resp.


Name. D. L. Deans
Age.
Disease. Compound Fracture of Arm
Result.
DAY OF DISEASE.
TEMPERATURE FAHRENHEIT'S SCALE.
Pulse.
Resp.


Name. Paul Green
Age.
Disease. Compound fracture of Humerus near shoulder-joint, produced by wiring an ununited fracture
Result.
DAY OF DISEASE.
TEMPERATURE FAHRENHEIT'S SCALE.
Pulse.
Resp.



MEDICAL PROGRESS.

ANATOMY AND PHYSIOLOGY.

THE DISTRIBUTION OF UREA IN THE BLOOD.—Gréhant and Quinquaud have undertaken an investigation into the amount of urea in the blood, of which the first instalment has just been communicated to the Society of Biology, of Paris. The main object of the inquiry is to determine the source of the urea. In the first place, they have ascertained the relative quantity of urea in blood *going to* and *coming from* the periphery, and afterwards they have determined the relation between that of arterial blood and that in the abdominal veins. Their figures show (1) that there is about the same quantity of urea in the blood returning from as in that going to the periphery, from which we may conclude that any urea which may be formed there must be carried to the centre of the circulation by the lymphatics; and (2) that the blood coming from the spleen and the liver is always considerably richer in urea than the arterial blood, especially during digestion. The difference may be as much as 9 milligrammes in every 100 grammes of blood in this condition, and if we suppose that 100 grammes of blood come from the liver every minute, carrying an excess of 9 milligrammes of urea, it gives 540 milligrammes per hour, or 13 grammes in 24 hours. On the other hand, if the animal is fasting the difference may only be 3 milligrammes per 100 grammes, which, on the same supposition as to blood-flow, gives 180 milligrammes per hour, or 4.32 grammes per day.—*Comptes rendus, Edin. Med. Jour.*

MOTOR FIBRES IN THE CARDIAC PORTION OF THE VAGUS.—Wedenskü has made some telephonic researches into the heart-sounds, which seem to point to the existence of motor filaments in the cardiac branches of the pneumo-gastric nerve. The heart of a dog was connected by means of two needles with a telephone, and on listening, the normal heart-sounds were heard. The vagus was then stimulated with a weak current, which only showed the rate of the heart's action, and a series of short sounds could be heard, accompanying the normal sounds. When the electrical stimulus was augmented in strength, so that the heart was stopped, nothing could be heard. After the injection of atropia by the jugular vein, to paralyze the inhibitory fibres, these sounds could be produced by any strength of current; and on the other hand, after the administration of curara to paralyze the motor fibres, no sounds could be caused by stimulating the vagus. From these facts Wedenskü concludes that there must be in the pneumo-gastric nerve some sort of motor control over the heart.—*Centralbl. für die Med. Wissenschft.—Edin. Med. Jour.*

A NEW FUNCTION OF THE RED CORPUSCLES.—Fano has studied the manner in which peptone is altered after being injected into the blood of animals. It is a well-known fact that it cannot be detected half an hour after injection, and by very careful investigation he thinks he has proved that the red corpuscles have the power to transform the peptone into globulin. The corpuscles, after a certain time, give up the globulin to the tissues, and thus form a nutritive reserve. We may liken the process to the glycogenic function of the liver cells.—*Sperimentale, Edin. Med. Jour.*

MATERIA MEDICA AND THERAPEUTICS.

IODOFORM IN ERYSIPELAS.—Mr. C. Clark Brennan, in the *Practitioner*, relates his success with this agent in erysipelas, which was, as he puts it, an accidental discovery. He gives four cases treated with iodoform collodion, a mixture of one part of iodoform to ten of collodion. Its prompt relief of the burning pain, which is such a constant symptom of erysipelas, its apparent power of arresting the progress of the disease and the remarkable freedom from irritation during the period of desquamation following the subsidence of the disease, are all strong reasons in favor of its extended use.

OSMIC ACID TREATMENT OF PERIPHERAL NEURALGIA.—Dr. Eulenberg, of Berlin, has employed subcutaneous injections of osmic acid in 29 cases of peripheral neuralgia. The dose employed was 7 minims of a 1 per cent. aqueous solution. The treatment was persisted in for periods of from 1 to 6 weeks, and the number of injections made varied from 3 to 14. Of the 29 cases only 7 are reported as cured, viz., 4 of sciatic, 1 of lumbar, 1 of brachial, and 1 of intercostal neuralgia. The success has not been as great as previous trials would lead us to hope for; but supposing that the whole 29 cases had resisted all other methods of treatment, success in 25 per cent. of the cases must have been gratifying, at least to those who were benefited.—*Medical Press.*

THE BENZOATE OF SODIUM IN THE SUMMER DIARRHŒA OF CHILDREN.—Dr. R. Guaita (*Gaz. degli Ospitali Bull. Gen. de Therap.*) considers the summer diarrhœa of children as a zymotic disease, caused by the presence of a special microbe introduced from without, or developed in the alimentary canal during digestion. A deficient diet, bad hygiene, excessive heat being the predisposing causes. With this idea he employs the benzoate of sodium, which has already been used to advantage by Kapuscinsky and Zilewiez in the vomiting and diarrhœa of children, as being anti-fermentative and modifying the intestinal mucous membrane.

Dr. Guaita used the benzoate of sodium alone and without any other treatment in 53 cases of children, varying in age from 6 months to 2 years. In 35 of these cases the affection was 24 to 30 hours old; in the other 18 it dated from 6 to 14 days. With the first he produced perfect relief always in from 4 to 8 days; with the second, after about 21 days, without a single death in either.

After the use of a purgative (calomel, jalap), he gave from 4 to 6 grammes of the benzoate of sodium in 100 grammes of water during the 24 hours, and continued its use for 2 days. The third day he gave a slight purgative (magnesia, manna), followed by a repeated use of the benzoate. At the end of 2 days an improvement in the character of the stools was very noticeable, with but little fœtid character, and a checking of the vomiting. During treatment the child is strictly dieted, only taking a little lemonade and a few spoonfuls of good wine. Milk and soup are absolutely interdicted, as Dr. Guaita finds that milk, particularly that of the cow, ferments readily in the stomach, and increases the trouble. Children at the breast are allowed to nurse 4 times in 24 hours.

MEDICINE.

THE PATHOLOGY OF PNEUMOTHORAX.—Dr. Samuel West gives in the *Lancet* an analysis of the records of the City of London Hospital for Diseases of the Chest, extending over a period of twenty-eight years, as a contribution to the pathology of this disease. He finds: First, that 90 per cent. of all the cases are attributed to phthisis.

Second. About 5 per cent. of all deaths from phthisis are the result of pneumothorax.

Third. Of the cases of pneumothorax, about 75 per cent. die within the first fourteen days, and about 90 per cent. before the end of the first month, though the duration of life of the remaining 10 per cent. may be considerable.

Fourth. The period of greatest frequency coincides with the period of greatest mortality from phthisis, and lies between the ages of twenty-five and thirty-five.

Fifth. Pneumothorax is very rare before the age of fifteen or after forty.

Sixth. It is commoner in men than in women, but the mortality is greater in women.

Seventh. One side of the chest is not more prone to be attacked than the other, nor does the side attacked modify the prognosis.

Eighth. Effusion commonly occurs, though not necessarily. It is not necessarily purulent; in fact, serous, sero-purulent, and purulent effusions are of about equal frequency, though in cases of long duration, an effusion which was serous to begin with often becomes purulent.

Ninth. The chances of effusion being present, and of that effusion being copious and probably also purulent, increase with the duration of the case; but effusion may be absent throughout, or be scanty in old cases and copious in recent cases, or, whether large or small, remain serous throughout or be purulent from the commencement.

Tenth. The perforation is found in about two-thirds of the cases, and may be discovered even in cases of long standing. It is usually single, but may be multiple. It is generally circular in shape. Its size is commonly small, two or three lines; but occasionally it is large, even an inch or more in diameter. Its favorite position is in the upper lobe, where it occurs nearly twice as frequently as elsewhere, and in the mid-lateral region.

Eleventh. There is, lastly, no relation between the amount of lung disease and the occurrence of pneumothorax.

CYSTICERCUS OF THE BRAIN.—In the March number of the *Archives de Neurologie*, M. Bernard records a case of this somewhat rare affection. The patient was a man, aged 24 years, who had suffered from attacks of headache and vomiting for a year when he came under observation. These attacks were accompanied by vertigo and transient loss of vision. Latterly the headache had become constant; there was no loss of motor power, but the patient staggered in walking, and complained of numbness in the right side of his face and tongue. There had also rapidly ensued impairment of vision. On examination, there was marked retraction of the field of vision, especially on the right side; his color fields could not be taken; the visual acuity was much diminished on the right side. The pupils were dilated, and very sluggish both to light and during accommodation; there was a typical "choked disc" on each side. After his admission to the Salpétrière the vomiting was checked, but he suffered much from head-

ache and from vertigo, and he gradually became quite blind. He died from double pneumonia. At the necropsy, a small sac was found just in front of the optic commissure, but not having any direct relations to it; a second sac was seen depressing the second frontal convolution on the left side; and a third embedded in the wall of the fourth ventricle, on a level with the left eminentia teres. There was evidence of inflammation of the ependyma here, and a general increase of cerebro-spinal fluid. It is to this third cyst that the author would attribute all the symptoms observed. The cysticercus which was found in it, measured five millimeters in length, four in width, and three in depth.—(*Medical Times.*)

A Vibrio Observed During Measles.—M. J. A. LeBel (*Journ. de Méd. de Paris*) reports that he has observed in the urine, during measles alone, the appearance of a slightly-curved rod, very refracting, and endowed with very slow movements. The length varies considerably, so that the observer sees them of every appearance, from that of the typical vibrio to that of the bacteria.

In the case of ordinary measles this vibrio only appears in the urine during a few days, and disappears almost simultaneously with the appearance of the fever and swelling of the face. He has observed, in the case of an infant, on the second day of the eruption, the vibrio and spores; the protoplasm which enveloped them disappeared very rapidly.

The naturally acid urine is a favorable soil for this micro-organism; it may be found in abundance in the vessels in which the urine is placed, distributed in the mass of the liquid. It is well, if one wishes to judge of the intensity of any particular attack, to examine each specimen of urine as it is passed.

This vibrio makes its second appearance at the desquamative stage; at that time, also, it is easy to recognize it. The skin may be scraped, and the scales placed first in sterilized water and then in sterilized urine; within twenty-four hours large numbers of the micro-organism may be seen. In severe and persistent cases it re-appears in the urine and on the skin for weeks and even months.

LeBel states that he has been extremely careful in his observations, and has no reason to think that they are not correct.—*Midland* (*Med. Miscellany.*)

Scarlet Fever of the Fœtus in Utero, and of the Mother at the Ninth Month of Pregnancy.—Dr. Charles A. Leale, of New York, has recently read (*Medical News*) a paper on this subject before the New York County Medical Association, in which he gives a brief review of the literature of this disputed subject. He was further stimulated to do so after reading an article on the subject in this Journal, on page 432. He makes the distinction between septicæmia and scarlet fever to be as marked as between measles and small-pox, and after a thorough and interesting review of the subject comes to the following conclusions:

Scarlet fever may attack the fœtus in utero.

The large proportion of children born with scarlet fever recover.

Scarlet fever of the newly born child has like manifestation as when it occurs later in life.

Scarlet fever may attack the woman during pregnancy and also immediately after childbirth.

Scarlet fever is exceedingly fatal to the woman during pregnancy and during parturition.

Scarlet fever rarely, if ever, affects the parturient woman if she has had a previous attack.

Scarlet fever causes death in the parturient woman by coma, exhaustion, or by convulsions.

Scarlet fever, being a self-limited disease, is best treated by relieving dangerous symptoms, and in accordance with the rules of hygiene.

Scarlet fever only exceptionally occurs during the ages that women bear children; therefore, the proportion of those liable to contract the disease during pregnancy and childbirth, must necessarily be small.

Scarlet fever and septicæmia are distinct diseases, being unlike in many respects.

This paper, by Dr. Leale, excited a good deal of discussion in the Association, and the discussion was of a character to support his conclusions. Dr. Dwyer had seen one case of scarlatina in the parturient woman, in which the mother suffered from violent eclampsia and expired at the moment of the birth of the child. He had, however, met with three cases in which pregnant women nursed children having scarlet fever, who escaped the disease themselves and whose infants, when born, did not have it.

Dr. Detmold and Dr. Gouley dwelt upon the condition of the kidneys in pregnancy, making the liability to scarlatina of peculiar interest, as, if the disease were recovered from, there was imminent danger of their being affected with permanent nephritis.

Dr. Lusk considered the subject at some length. He thought it best not to run any risks, mentioning the case of a practitioner with a very large obstetric practice, who from the very unfavorable results, was forced to the conviction that he had been carrying infection directly from his scarlet fever patients to his parturient women. Scarlatina in the parturient woman, as a rule, he believed, was not associated with inflammation of the peritonæum or with pelvic celilultis. As to the possibility of the occurrence of a scarlatinous rash due to puerperal septicæmia, and entirely independent of the infection of true scarlatina, he had his doubts, as the exanthemata occurred sometimes without rash, and scarlet fever sometimes occurred without the throat symptoms. Braxton Hicks in his researches, maintained that there were cases of puerperal septicæmia without the ordinary signs of scarlatina which were in reality due to this disease; but of 68 cases of puerperal disease seen in consultation by Hicks, no less than 37 were distinctly traced to the scarlatinal poison. Of these, 20 had the characteristic rash of the disease; but the remaining 17, although the history clearly proved exposure to the contagion of scarlet fever, showed none of its usual signs, and were not to be distinguished from ordinary typical cases of the so-called puerperal fever.

SURGERY.

A NEW SPONGE.—Sampson Gamgee, in the *Lancet*, describes a sponge made of curled cocoanut fiber, which will take up sixteen to eighteen times its own weight of blood or water, which when squeezed out still leaves it elastic and absorbent, readily filling and swelling out again, when dipped in liquid and squeezed, a number of times in succession. To make this permanently antiseptic, he encloses within an absorbent cotton nucleus a very thin ball or capsule, containing the antiseptic of any kind, and, within certain limits, in any quantity desired; the antiseptic to be set free by cracking the capsule with a squeeze, just before using the sponge.

ON THE SURGICAL TREATMENT OF VARICOCELE.—M. Hache (*Annales des Maladies des Organes Génito-Urinaires*) gives two cases illustrating the treatment of this disease by Prof. Guyon, who combines the ligature of the veins with a resection of the scrotum. The patient being anæsthetized, the scrotum shaved and washed with a 20 per cent. phenic solution, the boundaries for an elliptical incision greatest in its transverse diameter, are traced out upon the skin; the dimensions varying according to the volume of the varicocele, and the degree of flaccidity of the skin, after prolonged rest has diminished the size of the tumor. In one of these cases, where the affected side was 9 centimeters in its transverse (from the exterior to the posterior raphes of the scrotum) and 4 centimetres in its long diameters in excess of the sound side, M. Guyon made an incision 25 millimetres in length in the vertical, and 7 centimetres in the transverse diameter. After removing the skin, the common fibrous tunic is exposed, with the tunica vaginalis just beneath it. Then the anterior venous plexus is to be ligated without opening the tunica vaginalis, by passing a curved needle or grooved sound behind the venous plexus, after isolating the vas deferens. Two ligatures are then applied, which are separated from each other as far as possible. This avoidance of opening the tunica vaginalis except for the passage of the ligatures, M. Guyon considers as of great value, and as simplifying greatly the operation. After proceeding thus far with the operation, it only remains to close carefully the lips of the cutaneous incision, with antiseptic washing, etc. It is preferable to leave a small drain at one of the angles of the wound for twenty-four to forty-eight hours.

This operation embraces four points:

First. An elliptical incision, with its greatest diameter transverse, of the skin of the anterior portion of the scrotum.

Second. Ablation of the portion circumscribed by this incision.

Third. Double ligature of the anterior venous plexus of the cord, through the non-incised tunica vaginalis and common fibrous tunic.

Fourth. Suture of the skin.

OBSTETRICS AND GYNÆCOLOGY.

MENOXENIA—A YOUNG GIRL 17 YEARS OF AGE MENSTRUATES BY THE LEFT BREAST.—Dr. Rouxeau gives, in the *Gazette Médicale de Nantes*, the account of a young girl, of medium size, apparently in excellent health, who consulted him from the fact that she had never lost any blood through the ordinary natural passages, but that for four or five months she had a discharge of blood at regular fixed periods from the left breast, which continued for three or four days. At other times than the menstrual period the two breasts were similar. When seen by Rouxeau at the menstrual period, her chest-linen was bloody, her left breast covered with blood and a third larger than the right—the nipple being prominent and turgescent. The blood oozed from the nipple.

THE RELATIONS OF EPILEPSY TO PREGNANCY AND LABOR.—Dr. Raoul Béraud (*Archives de Tocologie*) gives the results of his observations in forty-six cases, taken from various writers and from his own experience, with the view of ascertaining the asserted injurious effects of the alkaline bromides upon the fœtus when taken by the pregnant woman, and the asserted curative influence of marriage upon epilepsy. He arrives at the following conclusions:

1. Pregnancy is not a cause of epilepsy; the epilepsy of olden times so described is the eclampsia of modern times.

2. The influence of pregnancy upon preëxisting epilepsy is favorable, unfavorable or null. When favorable it either suspends the attacks, or diminishes their frequency. When unfavorable it increases their frequency. Generally the character of the attacks is not modified. The form and intensity remain the same.

3. Those cases in which the influence of pregnancy is favorable are the most numerous.

4. In the same woman, the influence of pregnancy upon epilepsy is stereotyped, uniform. The effect produced by the first pregnancy is repeated by the following pregnancies.

5. The modifying influence of pregnancy is generally limited to the duration of gestation. In other words, the ultimate progress of the epilepsy is not modified.

6. There does not seem to exist a group of precise conditions, clearly determined, which would enable one to prognosticate the modifications which pregnancy might exert upon epilepsy.

7. The influence of epileptic attacks upon pregnancy is null. They do not produce either abortions or premature deliveries. The children are born alive and at term.

8. Labor is not a cause of epilepsy.

9. The influence of delivery upon preëxisting epilepsy is null.

10. In those exceptional cases where delivery occurs during an epileptic attack, there seems to be no influence upon the uterine contractions.

11. Marriage does not cure epilepsy, it aggravates it.

12. Bromidism which is useful to the mother, is not injurious to the child.

13. Epilepsy does not appear to predispose to eclampsia.

THE

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The Editor of this Journal would be glad to receive any items of general interest in regard to local events, or matters that it is desirable to call to the attention of the profession. Letters written for publication or containing items of information, should be accompanied by the writer's full name and address, although not necessarily to be published. All communications in regard to editorial work should be addressed to the Editor

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SATURDAY, JUNE 21, 1884.

Heroic Doses Prompted by Germ Theories.—During the last twenty-five or thirty years the profession has been strongly influenced by a prevailing therapeutic skepticism. It had become a popular habit to decry active medication in the treatment of almost all forms of disease, and to extol the powers of nature aided by simple hygiene. The reaction from this state of skepticism and expectancy in the treatment of disease, began with the revival of the antipyretic treatment of fevers, and is being pushed on by the rapid development of the doctrines of germ etiology and consequent germicide therapeutics, until even now, it is becoming an important question whether the patients are not in more danger from the large doses of microbe remedies administered in some cases, than from the microbes themselves.

Our attention was directed to this subject by two paragraphs in the present number of this Journal, one under the head of Medical Progress, and the other in the Proceedings of the Illinois State Medical Society. In the first, Dr. Guaita is represented as attributing the "summer diarrhœa of children" to the presence of a special microbe, and as giving to children between 6 months and 2 years of age, affected with the disease, first a purgative of calomel or jalap, followed by from 4 to 6 grammes (℥i to ℥iss) of benzoate of sodium dissolved in 100 grammes of water every twenty-four hours for two days. On the third day he gives a milder purgative of magnesia or manna, and then resumes the administration of the benzoate of sodium, and continues it from two to four days longer. It will be seen that the quantity of the benzoate reported as given in the twenty-four hours, is equal to from $2\frac{1}{2}$ to $3\frac{4}{5}$ grains every hour. We have repeatedly seen decidedly sedative or depressing effects from such doses, given to children between three and five years of age, only once in from two to three hours. When they are given every hour for several days in succession, to infants under one year of age, aided by one or two cathartics and an almost entire prohibition of nourishment, we are quite certain the little sufferers are in more danger from the remedial measures employed than from all the microbes they may have in any part of their digestive organs.

The paragraph in the Proceedings of the Illinois State Medical Society relates to the, so-called, specific treatment of diphtheria, by large doses of the corrosive chloride of mercury.

In the paragraph alluded to, the doses given by Dr. Cook are not stated, but they ranged from two to three milligrammes (gr. $\frac{1}{30}$ to $\frac{1}{20}$) at short intervals, to children between three and ten years of age. These doses, though large enough certainly to be efficient, were yet within the limits of safety, so far as direct toxic effects upon the patients are concerned. But elsewhere we have seen several reports representing the giving of eight, ten, and even fifteen milligrammes (gr. $\frac{1}{8}$-$\frac{1}{6}$ and $\frac{1}{4}$) at a dose, of the same active drug, to children suffering from severe diphtheria. That this disease is accompanied by a very marked diminution of susceptibility to the influence of all drugs, is well known; and that some cases recover after taking very large doses of bichloride of mercury, whiskey, and many other things, is true. This, however, does not prove that such doses, repeated at short intervals, are not liable to accumulate, in one or two days, a sufficient quantity of the drug to produce dangerous or even fatal effects.

Dinner to Dr. Alfred Stille.—On the evening of the 5th inst. a dinner was tendered to Dr. Alfred Stillè, on behalf of the medical profession of Philadelphia, prompted by his recent retirement from the Chair of Theory and Practice of Medicine in the University of Pennsylvania, after a distinguished career as a teacher, author, and general practitioner. The entertainment was an elegant one, and the occasion highly enjoyed by the participants. Dr. J. M. DaCosta, President of the College of Physicians, presided; and the occasion was honored by the presence of Dr. Austin Flint, of New York; Dr. George C. Shattuck, of Boston, and Dr. J. S. Billings, of Washington, as guests.

The place vacated by Dr. Stillè has been most ap-

propriately and worthily filled by the appointment of Dr. Wm. Pepper, who is also Provost of the University.

NEW JERSEY STATE MEDICAL SOCIETY.—At the recent annual meeting of the Society, the following officers were elected for the current year: President, Dr. P. C. Baker, of Morristown; Vice Presidents, Drs. Joseph Parrish, of Burlington; Charles J. Kipp, of Newark, and J. W. Ward, of Trenton. Corresponding Secretary, Dr. Wm. Elmer, Jr., of Trenton. Recording Secretary, Dr. Wm. Pierson, Jr., of Orange. Treasurer, Dr. W. W. L. Phillips, of Trenton.

THE MISSISSIPPI VALLEY MEDICAL ASSOCIATION.—This organization, which was formerly called the Tri-State Medical Society, will hold its next regular meeting in Springfield, Illinois, in September next.

GOVERNMENT PRIZES FOR IMPORTANT DISCOVERIES IN MEDICINE.—Our Washington correspondent in the present number of the JOURNAL, gives a petition recently presented to Congress, asking the National Government to offer a prize of $100,000 for the discovery of the efficient cause of yellow fever, or of a reliable mode of preventing its epidemic prevalence. The evident object of the petitioners is to excite the most active and persistent investigation concerning the etiology and mode of propagation of yellow fever, by holding out the certainty of an ample reward to the investigator who shall actually succeed in identifying its efficient cause or in reliably controlling its propagation and diffusion. The object is a very important one, and we may concede it to be a proper function of government to appropriate money for its promotion. But is the offering of a large prize the most appropriate and efficient method for the Government of a great Nation to adopt, for the promotion of scientific investigations, and especially for the promotion of an investigation so extensive and complicated, and withal so intimately related to the sanitary and commercial interests of the whole people, as that for the identification of the cause or causes of yellow fever? The only valid excuse for asking government aid, is the fact, that the time and means required for prosecuting the investigation proposed to a thoroughly reliable and successful issue, are beyond the reach of the individuals most competent to execute the work. Yet the offer of a prize of $100,000 to be paid only after the investigation has been successfully completed, and then solely to the one fortunate competitor, furnishes no one with either food, clothes, or materials while prosecuting the important work, perhaps at the risk of his own life. It seems to us more consonant with the dignity and honor of the Government, as well as far more likely to accomplish the object desired, to appropriate a sufficient sum of money, whether it be $50,000 or $500,000, and charge the National Board of Health or some competent commission with the duty of employing a sufficient number of the most competent and reliable investigators to man every department of such an inquiry, and prosecute it at every available point, until the results obtained were clearly demonstrated facts. Such a course would permit the necessary combinations of labor and skill, and the prosecution of parallel lines of work in different places, and secure to each scientific workman a just compensation at the time he would most need it.

SOCIETY PROCEEDINGS.

THIRTY-FOURTH ANNUAL MEETING OF THE ILLINOIS STATE MEDICAL SOCIETY.

[CONTINUED FROM No. 24.]

WEDNESDAY, MAY 21, 1884—SECOND DAY.

Dr. Christian Fenger, of Chicago, read a paper on Excision of the Hip and Knee Joints, with special reference to the final results of successful operations, these results being illustrated by the exhibition of patients treated by Dr. Fenger.

Dr. M. F. Bassett, of Quincy, read a paper on Vaccination, taking the ground that humanized virus, as shown by a long experience, was preferable to bovine virus, and produced results more satisfactory. So far as he was concerned, he was determined that his patients who repudiated humanized virus should take the risk of death by small-pox rather than receive bovine vaccination at his hands. The paper led to a debate. Dr. Lyman said there was one thing not noted in the paper, and that was that the humanized virus produced results in five days, and the bovine in from seven to ten days. Dr. Ingals said it was more important to prevent disease than to cure it. He had used in the main humanized virus, but of late years had used bovine virus. One was just as good as the other if it was good virus and judiciously applied. He had never perceived any great difference of results in the use of both kinds. Dr. E. P. Cook indorsed Dr. Ingals' remarks, and took exceptions to Dr. Bassett's paper. Dr. A. B. Strong, of Chicago, said in a wide experience in vaccination he had found that bovine virus had taken more violently and produced more fever than human virus. Dr. Cochran, of Greenfield, was opposed to the vaccination of infants with humanized virus, on account of the danger of syphilitic poison. Dr. Johnson, of Chicago, said he had studied the effects of 40,000 vaccinations with humanized virus in this city after the great fire, and there was not a single case in which any syphilitic or constitutional disease had resulted. He had the statis-

tics of these cases, and also of the work done by the State Board of Health in vaccinating with bovine virus thousands of emigrants arriving here on their way west. Vaccination was a fine art, and if practiced with sufficient care was always beneficial. Dr. Gill, of Cleveland, Dr. S. J. Jones, and Dr. Andrews, of Chicago, took part in the close of the discussion, which resulted in the decision that the condition of the patient and the manner of applying the virus caused various results, but that either bovine or humanized virus was efficacious, and would continue to be used by physicians according to their preference.

A recess of ten minutes was taken, to give the delegates time to select a member from each county for the Nominating Committee, and after their report was received, an adjournment was taken until 2 o'clock.

THE AFTERNOON SESSION.

At the opening of the afternoon session Dr. H. A. Johnson, of Chicago, read an interesting and technical paper on the "Bilateral Paralysis of the Abductors of the Vocal Chords." He said the difficulty was one solely of inspiration. Patients have been known to die suddenly. One of the spmptoms of the disease was difficult breathing. In every case there was greater difficulty in inspiration than expiration. To illustrate his subject the doctor exhibited a patient, who had been subjected to the operation of tracheotomy by Dr. Edmund Andrews on May 8, 1881, and who now breathes freely through a tube with a ball slot inserted in his neck, which he will be compelled to wear all his lifetime.

Dr. Graham, of Chicago, produced a girl 13 years of age upon whom the operation of tracheotomy had been performed by himself and Dr. A. B. Strong, with advice from Dr. Skeer. The operation was made four weeks ago. In this case the patient was afflicted with goitre, which was being reduced by daily applications of iodine and galvanic treatment. An incision for a tube had been made above the thyroid, but a lower one had to be made before the patient was given relief. In this case the Durham and other ordinary fenestrated tubes could not be used, and a tube was invented for the purpose. The patient was now doing nicely, although at one time she was in a decidedly precarious condition.

The Committee of Arrangements announced the election by invitation of Dr. A. J. Stone, of St. Paul.

Dr. J. P. Matthews read a paper on the diseases of children. The higher mortality among children over adults might be accounted for, first, on the principle of the survival of the fittest, and, after this, by injudicious clothing, bad diet, and impure air. These gave rise to the diseases that wrought the greatest havoc among children. Scarlatina was in this category. It was generally imported, although the germs might have had their origin in certain undiscovered meteoric conditions. The doctor detailed a number of cases illustrating the insiduous character of the contagion and the ease with which it spread. He had found an efficacious treatment to be sponging with vinegar, the application of tincture of aconite and of carbolized vaseline to ulcers. Diphtheria arose from the same sources, practically, as scarlatina, as did also membraneous croup. For these cases he had used, with the greatest success, a steam bath, holding the patient where it would inhale the steam and fumes from the slacking of quick lime. In cases of diarrhœa and other infantile complaints the milk and food supply was to be considered; the mother's mode of life, and her ignorance and carelessness of the first principles of the proper care of her children, were not only the causes of much disease among infants, but it prevented successful treatment. Children were also given too much tea and coffee. It led to tobacco and whiskey and other stimulants in later life. A cup of strong tea or coffee at night often prevented a strong man from sleeping by acting directly on his brain, and what must be the effect of such powerful stimulants and astringents upon the delicate and sensitive nerve-tissues of a child? In the vast majority of the diseases of children, and especially in epidemics, the disease arose from the breeding of germs.

Dr. K. E. Rich, of Winona, and Dr. Whitmire, of Metamora, accepted the germ theory, and the latter had used the steam and a chloride of lime bath with beneficial results in several cases. Dr. Hamill, of Chicago, said he had used with great success a preparation of chlorate potash and guaiacum. He was in the habit of treating diphtheria by this method.

Dr. Whitmire explained, in response to a question, that he had applied the chloride of lime and steam treatment by the spray method.

Dr. Davis, of Chicago, said that inasmuch as the germ idea seemed to be a favorite one, he would like to ask what effect large doses of bi-chloride of mercury had had in cases of diphtheria. Since everything was running to germs, and this was the greatest germicide known, he would like to know the effect of its use by members of the Society.

Dr. E. P. Cook, of Mendota, a former President of the Association, acknowledged that he had had a limited experience in the use of bi-chloride of mercury. His experience of its use was that in follicular pharyngitis the patients all got well, but in malignant diphtheria they died. In the latter form of the disease, seven out of a group of eight of his patients had died after treatment with bi-chloride of mercury.

Dr. Wetmore, of Waterloo, read a paper on Physiology. The speaker illustrated his theme with a number of charts.

Dr. J. F. Todd, of Chicago, read a paper on "Original Investigation," pertaining in its subject-matter more particularly to the etiology of disease.

THIRD DAY.

The third day's session of the Illinois State Medical Society opened in the First Methodist Church at 9:45 o'clock Thursday morning. In the absence of the President, Dr. Andrews, Dr. David S. Booth occupied the chair. The Committee on Medical Legislation for the Insane, consisting of Drs. Walter Hay, E. P. Cook, and William Hill, reported progress, and was continued for the purpose of presenting certain suggestions to the legislature at the next meeting of that body.

Dr. A. B. Strong, of Chicago, called the attention

of the society to the deficiency in the wording in the law of this State providing anatomical subjects for dissection, and asked every physician to aid in the enactment of a law that would be *mandatory* and thus enable the profession to secure subjects for dissection without the usual circumlocution they had been compelled to resort to during the past year. There had been more difficulty experienced in getting cadavers for dissection since last winter than ever before. Dr. Cook said that although he was not locally interested in the pursuit of medical studies, yet he would heartily indorse any effort to secure needed legislation that would enable the Faculty of the medical colleges to secure the bodies of paupers after all due diligence had been used to find the friends of the unfortunates. He advised that attorneys be employed for that end, for the reason that it would be undignified for the members of the profession to enter ward politics for any such purpose. Dr. M. F. Bassett thought that cities of 100,000 inhabitants and over, should not be favored in the law governing the disposition of the pauper dead any more than cities of lesser population, which may contain medical schools. Dr. H. A. Johnson, of Chicago, said the present law was imperfect, but it was the best that could be secured at the time of its passage. It required amendments and additions to the end that medical science may progress and the graves of the dead be saved from desecration. Two arguments should be used in urging the passage of a new bill; first, the demands of humanity in the education of men in medical schools, and second, the pauper class only should be drawn from to secure subjects, and to achieve that result, public sentiment, through the press, should urge legislators to the proper action.

Dr. R. Boal, of Peoria, suggested that the members of the Legislature should attend to the bills on dissection and on the commitment of the insane early in the session. Dr. Walter Hay advised the delegates to have patience until the Legislature should meet again, when new bills might be presented, and in the meantime, the members of the Legislature could be seen by the physicians and copies of the laws proposed furnished and their adoption urged. Dr. A. H. Burr wanted to have the proposed amendments read, but on motion of Dr. Cook, the discussion was closed.

Dr. E. Ingals, Chairman of the Nominating Committee, reported the following list of officers and standing and special committees for the ensuing year, and the Society adopted the report: President, Daniel S. Booth, Sparta; First Vice-President, S. C. Plummer, Rock Island; Second Vice-President, W. T. Kirk, Atlanta; Treasurer, Walter Hay, Chicago; Secretary, S. J. Jones, Chicago; Assistant Secretary, H. B. Buck, Springfield. Members of Judicial Council, S. K. Crawford, Monmouth; George Wheeler Jones, Danville; John Wright, Clinton. Committee of Arrangements, Drs. Griffith, Matthews, Rauch, Whitney, and Buck, all of Springfield. The standing committees are as follows: Committee on Practice, Norman Bridge, Chicago; C. H. Norred, Lincoln; J. R. Livingood, Rossville. Surgery, W. A. Byrd, Quincy; D. A. K. Steele, Chicago; Cass Chenowith, Decatur. Obstetrics, Charles W. Earle, Chicago; T. D. Washburn, Hillsboro; Mrs. Anna S. Adams, Peoria. Gynæcology, David Prince, Jacksonville; Sarah Hackett Stevenson, Chicago; O. B. Mill, Peoria. Materia Medica and Therapeutics, Thomas M. McIlvaine, Peoria; J. F. Todd. Chicago; Miss Catharine Miller, Lincoln. Ophthalmology and Otology, W. T. Montgomery, Chicago; C. R. Park, Bloomington; Robert Tilley, Chicago. Necrology, E. Ingals, Chicago; William Hill, Bloomington; M. F. Bassett, Quincy. Special Committees: Laryngology, E. F. Ingalls, Chicago. Oral Surgery, J. S. Marshall, Chicago. Pediatrics, Mrs. Dr. A. F. Rooney, Quincy. Dermatology, Dr. W. J. Maynard, Chicago. Orthopædic Surgery, Dr. C. E. Webster, Chicago. Tetanus, C. Truesdale, Rock Island. Insanity, R. J. Patterson, Batavia. Alcohol as a Therapeutic Agent, M. F. Bassett, Quincy. Effects of Malaria in Puerperal Cases, H. Judd, Galesburg. Physiology, A. Wetmore, Waterloo. Treatment of Epilepsy, D. R. Brower, Chicago. Analysis of a Certain Class of Remedies of which Physicians are Not Positive as to Their Therapeutic Value, W. L. Ransom, Rockford. Biographical Committees: J. H. Hollister, Chairman; on the Influence of Appreciable Meteorological and Topographical Conditions on the Prevalence of Acute Diseases, N. S. Davis, J. H. Hollister, J. F. Todd, of Chicago. Medical Legislation, B. M. Griffith of Springfield, Walter Hay of Chicago, A. B. Strong of Chicago, J. L. White of Bloomington, T. B. Haller of Vandalia, W. A. Haskell of Alton, E. P. Cook of Mendota. The Committee on Original Investigation is to be continued. The Committee on Malignant Growths, Dr. C. Fenger, Chairman, was continued for another year.

FURTHER REPORTS.

Dr. Ransom, of Rockford, read a report on certain therapeutical remedies, with which he said physicians were not wholly acquainted. He called attention particularly to the "spurge," or euphorbia corollata, commonly called the blooming spurge, wandering milkweed, go quick, etc. The resinous principles of euphorbia were emetic, diuretic, and diaphoretic in their action. It was but little used except by the eclectics, and was given in one-tenth and one-thirtieth grain doses, and even in one and two-grain doses sometimes. It might be given in all cases of dropsy, and especially in hydrothorax, and it was said to excel ipecacuanha as an expectorant for the latter affection. Tincture of euphorbia was used as an antidote for rattlesnake-bites, and the stings of tarantulas and other poisonous insects. His conclusions were that it could be applied most efficaciously in infusions, in cases of dropsy, where there are functional cardiac disorders, also in the treatment of ovarian cysts. He advised the use of the remedy in the dropsy of Bright's Disease, to remove the anasarca.

Dr. C. Fenger, of Chicago, read a paper on The Treatment of Acute Gangrene of the Lung. Four cases are now on record as having been operated upon. Two of the patients died, and one recovered

after a long convalescence. The fourth and last case was operated upon by Dr. Fenger in this city four weeks ago, at the end of the second week of the disease, which was the result of croupous pneumonia. The patient is now almost well. The doctor held that an operation is always justifiable, and if done early and with care would effect a cure in most cases.

The Standing Committee on Obstetrics was next heard, through Dr. H. K. Crawford, of Monmouth, who presented a report on Postpartum Hæmorrhage, of which he gave merely a condensed statement. There were embodied in the report 2,110 cases for the past twenty-five years. A few of the anomalies and deformities were mentioned of children at birth which closed the report.

Dr. R. H. Babcock reported a case of dexeocardia, in a child 3 years of age, which is not congenital. The liver is normalty located, also the spleen; the heart had rotated to the right side. The doctor had seen a similar case in a man 32 years of age, six months ago.

THE AFTERNOON SESSION.

At the opening of the afternoon session the Secretary read a congratulatory telegram from the Missouri State Medical Society, in session at Sedalia, and was instructed to send a suitable reply. Dr. E. A. Ingersoll, of the Committee on Obstetrics, reported a case of caput succedaneum of a female child, weighing ten and one-half pounds at birth. The report was voted to be received and published. Dr. Vanhorn, of Jeffersonville, reported a paper prepared by Dr. Duhadway, of the same place, on Postpartum Hæmorrhage, which was received and ordered published. The reading of the remaining papers was limited to five minutes each. Dr. Caldwell, of Freeport, read a report on gynæcology, being a paper on Ulceration of the Cervix Uteri, which was referred to the Committee on Publication. Dr. A. F. Rooney, of Quincy, submitted a paper on Menorrhagia, giving interesting details of the effect of female troubles in producing melancholia and insanity. It was referred to the Committee on Publication. Dr. R. Tilley, of Chicago, of the Committee on Ophthalmology, read a paper on the "Jequirity Bean," a solution of which, applied to the conjunctiva of the eye, is efficacious in the treatment of pannus and dry conjunctivitis, but should not be used in the case of very young people. The paper by Dr. I. N. Danforth, of the Committee on Simple Renal Catarrh, not being ready, he was continued on the committee for another year. Dr. B. F. Crummer, of Warren, presented a paper on Drugs and Medicines, in which he led the idea that patients and physicians would be better if the latter would compound their own prescriptions. The Treasurer, Dr. Walter Hay, reported receipts for the year of $1,742, expenditures of $601, and a balance on hand of $1,141. The report was accepted.

It was decided to read abstracts of the voluntary papers, so that under the by-laws they might be incorporated in the proceedings. The first was by Dr. F. C. Hotz, on Myopia Usually Developed During School Life. The doctor thought that there had been a great improvement in the typographical construction of school-books of late, and that the greatest danger was to be apprehended from miscellaneous literature printed in small and imperfect type. Dr. J. S. Whitmire, of Metamora, read a paper on the Suppression of Catamenia. He did not favor hip baths and catharsis, but avoidance of drugs and plenty of outdoor exercise for young people. Dr. C. E. Webster, of Chicago, read a paper on Potts' Disease of the Spine, and being a sufferer from the disease himself, his paper had additional interest. Dr. C. W. Earle, of Chicago, read a paper on Pancreatic Anæmia, giving the particulars of four cases treated by him. Dr. Robert Tilley exhibited an improved ether inhaler. A paper on Mastoid Abscess was read by Dr. E. L. Holmes, of Chicago. Dr. H. Gradle presented a paper on Purulent Inflammation of the Middle Ear.

The election of delegates to the American Medical Association, which meets in April next in New Orleans, resulted in the selection of the following list: Drs. G. M. Chamberlin, Walter Hay, R. Tilley, Moses Gunn, J. H. Hollister, F. C. Shaefer, L. H. Montgomery, J. F. Todd, N. S. Davis, W. W. Jaggard, Arthur R. Reynolds, S. H. Stevenson, D. W. Graham, N. S. Davis, Jr., L. L. McArthur, E. W. Andrews, W. T. Belfield, A. H. Burr, Simon Strausser, C. E. Webster, E. F. Ingals, H. A. Johnson, all of Chicago; and G. W. Jones, of Danville; P. H. Oyler, Mount Pulaski; H. Judd, Galesburg; M. F. Bassett, Quincy; S. K. Crawford, Monmouth; S. H. Lambert, Assumption; A. K. Vanhorn, Jerseyville; T. D. Washburn, Hillsboro; W. R. Caruthers, Delevan; O. B. Mill, Peoria; J. B. Matthews, Carlinville; Dr. Haller, Vandalia; E. P. Cook, Mendota; M. Reece, Abingdon; O. W. Moon, Lockport; C. C. Hunt, Dixon; C. L. Armstrong, Carrollton; J. F. Keifer, Sterling; W. L. Ransom, Rockford; H. B. Buck, Springfield; T. F. Worrell, Bloomington; B. M. Griffith, Springfield. Delegates to adjacent State Societies: Dr. R. W. Gillette, Danville, to Indiana; Dr. W. Mendenhall and Dr. B. H. Harris, of Groveland, to Missouri; Dr. L. H. Montgomery, of Chicago, to Ohio; Dr. E. Andrews, of Chicago, to Michigan; Dr. S. J. Jones, of Chicago, to Wisconsin; Dr. W. Hay, of Chicago, to Iowa.

Dr. Walter Hay offered a resolution, which was adopted, authorizing a prize of $100 for the best treatise on the treatment of diphtheria, and $100 for the best tabulated statement of any ten cases of any disease coming under the treatment of the practitioner, the same to be decided by a committee of three.

Dr. M. F. Bassett, of Quincy, offered resolutions returning thanks to the Chicago delegates for their hospitality.

The Society then adjourned, to meet in Springfield next year.

The Illinois State Board of Health is now engaged in revising the Register of Physicians, preparatory to publication. Any changes or corrections should be promptly sent to the secretary. Lists of the officers of the medical societies in the State are also requested.

BOOK REVIEWS.

ELEMENTS OF HUMAN PHYSIOLOGY. By HENRY POWER, M.B., F.R.C.S., Examiner in the Board of Anatomy and Physiology, Royal College of Surgeons, etc., etc. Philadelphia: 1884. Henry C. Lea's Son & Co.

The study of physiology, with all its fascinating details of experimental research, cannot be regarded as secondary, either in importance or interest, to the student of medicine. So extensive is its scope, and so inseparably is it bound to the kindred subjects of anatomy, physics and chemistry, that any attempt to separate it from them must inevitably lead to incompleteness and a certain degree of confusion, while it robs the subject greatly of its interest. To strip it only of the details of experimentation, leaves it bare enough; but when most of the considerations of physics, anatomy and chemistry are banished, there is left little besides the naked mathematics of physiology.

The volume in hand is one of the manuals for students of medicine. A small manual of a vast subject must necessarily be unsatisfactory in many regards, and so we find it in this instance; for, as we are apprised in the preface, the simultaneous appearance of four complementary volumes has caused the omission of many subjects usually included in the text-books of physiology.

The character of the work done is excellent, but there is too much left undone to make this book a very great aid to the average American student, at least, who would scarcely find it a valuable adjuvant in preparing for his examinations, provided he had in his library a copy of Foster, Dalton or Carpenter.

T. C. H.

FOREIGN CORRESPONDENCE.

PARIS, May 21, 1884.

It was only about a month ago that Professor Wurtz delivered a most touching funeral oration over the tomb of his late master and friend Professor J. B. Dumas, the illustrious chemist and Perpetual Secretary to the Academy of Sciences, who died at Cannes on the 10th of April, but was interred in Paris.

Professor Wurtz has since been called away, and his death, which took place on the 12th instant, was as sudden as it was unexpected, and caused great consternation among all who knew him. He had been laboring under a diabetic affection, but nothing in his physical bearing or intellectual faculties betrayed any falling off, much less any thing that would portend so near a fatal end.

Dr. Adolphe Wurtz was a native of Strasburg, where he was born on the 26th of Nov., 1817. He went through his medical studies, and graduated at the Faculty of that city in 1843, when he sustained with great credit, his thesis on albumen and fibrine. Two years later he came to Paris, where his brilliant qualities soon became known, and he was appointed Chief of the Chemical Laboratory of the Faculty of this City and Assistant to M. Dumas, whom he eventually succeeded as Professor of Organic Chemistry at the School of Fine Arts. In 1847 he became Agrégé of the Faculty of Medicine, and was subsequently promoted to Professor of Chemistry. In 1866 he was unanimously chosen to the Deanship of the Faculty, which became vacant by the resignation of Professor Tardieu. During his Deanship he effected great reforms in the School of Medicine and was much beloved by both professors and students. In 1875 he resigned, owing to the multiplicity of his functions, but the Faculty conferred on him the title of Honorary Dean. In 1856 he succeeded the celebrated Magendie at the Academy of Medicine in the Section of Physics and Chemistry, and in 1867 was elected member of the Academy of Sciences. He was the author of several remarkable memoirs, bearing principally on Organic Chemistry, and he held a sort of transition position between the old and new schools. In 1850 he was created Chevalier of the Legion of Honour, and in 1869 was invested with the Grand Cross of the same Order for the valuable services he had rendered to science, and last year he was nominated Permanent Senator of the French Republic.

His funeral took place at the Père-Lachaise, in Paris, on Thursday last, with all the honours due to his rank as Senator and Academician. The Government, the School of Medicine, the Academies, and the various learned societies to which the deceased belonged, were represented by delegates, and several orations were pronounced over his grave.

At the death of Professor Lasègue, about a year ago, Professor Jaccoud was transferred to the chair of Clinical Medicine at La Pitié Hospital, and Professor Damaschino was appointed to succeed him in the chair of Medical Pathology at the Faculty of Medicine. In inaugurating his new chair and his summer course of lectures, he chose for his first lecture the History of the Circulation of the Blood, as a preliminary to his subsequent lectures on the Diseases of the Sanguineous and Lymphatic Vessels. In going back to the remotest periods of medical history, Professor Damaschino pointed out the vague notions entertained by the ancients in respect to the circulation of the blood, before the remarkable discovery of Harvey, which rendered his name immortal. In a few well-chosen phrases M. Damaschino gave an admirable exposition of the work done by the Alexandrian school for the advancement of medicine, the remarkable works of Galen, and rendered justice to the investigations so precise of Vesalius, the celebrated anatomist. He then referred in flattering terms to Sanctorius, the father of clinical thermometry; to Servetus, to Cesalpin, to Colombo, and finally to Harvey, the great discoverer of the circulation, whose theories and demonstrations were corroborated by the microscopic researches of Leuwenhœck. The latter made great advances toward the elucidation of cardiac pathology, which was gradually developed and perfected by Morgagni, Senac, Van Swieten, Avenbrugger, Corvisart, and Bouillaud. "A knowledge of pathology," added the Professor, "should

be obtained not only by clinical observation, but by the aid of every branch of all the sciences and instruments of precision applicable to medicine." It was thus that Marey rendered such signal service by his invention and practical application of the sphygmograph, which may be considered the crowning edifice of the discovery which has rendered the name of Laënnec immortal. Dr. Damaschino impressed upon his hearers the necessity of never flagging in their studies, and this advice applies as much to graduated practitioners as to medical students, as medicine is an ever-progressing science, and he who does not make himself acquainted with the new inventions or discoveries will find himself lamentably distanced by his more diligent confrères, as much to his own prejudice as that of his patients; and although a medical man should be eclectic, yet he should not sacrifice his personality to any particular doctrine or method simply because they are in fashion, but he must first put them to the crucial test of experimental and clinical observation before he adopt either.

Hitherto ophthalmia neonatorum has been a very common complaint among new-born infants in the lying-in institutions in Paris, but since the introduction of more sanitary measures this and other puerperal affections have been very much reduced. In addition to improved sanitation, the following course is adopted as a prophylactic measure against purulent ophthalmia: In changing the clothes of the infants morning and evening, a few drops of a 3 per cent. solution of boracic acid are instilled into the eye. This practice has been adopted at the "Clinique d'Accouchements," which has reduced the cases of ophthalmia from one in every six new-born infants to one in nineteen, according to a thesis lately submitted by Dr. Connen for the Doctorate of the Paris Faculty. ALEX. BOGGS.

DOMESTIC CORRESPONDENCE.

FROM WASHINGTON.

MEDICAL MATTERS BEFORE CONGRESS—YELLOW FEVER.

June 3, Mr. Brown presented the following petition, which was referred to the Committee on Epidemic Diseases:

To the Senate and House of Representatives of the United States:

The undersigned respectfully represent that the insecurity to the public health from the epidemic prevalence of yellow fever is chiefly due to a total ignorance of the real cause of the disease, together with the circumstances and laws governing its generation, reproduction, and spread; that the portability and reproductive nature of said cause suggest the idea of physical and perhaps physiological qualities that may lead to its ultimate identification by some means within the reach of science, or, if not to this, to a more intimate knowledge of its organic potencies by which its virulence as a poison may be reduced; therefore, with a view to stimulate inquiry in this direction, and thereby subserve the commercial interests of the country and the welfare of its citizens, your petitioners pray your honorable bodies to offer a premium of $100,000, open to the world, for the discovery of the true cause (or germ) of yellow fever, with (or in default thereof) any certain means of effecting its prevention, destruction, or material modification, the same to be subjected to such practical tests, under the direction of Congress, as will determine its real merits and efficiency.

In support of this petition we will present no array of statistics to show the frequency of the epidemic prevalence of the disease, the loss of life and suffering to the people, the disasters to commerce entailed by the suspension of intercourse with infected ports and even cities of the interior of our country, the bankruptcy of cities caused by its blighting presence, or even that it (yellow fever) is a perpetual menace to this country. All of this and much more is familiar to you and to the intelligent American public, who since the epidemics of 1876, 1878, and 1879, have favored controlling legislation on the subject. We do desire, however, to present and stress the fact, more potential than the most convincing statistics above alluded to, that the failure of sanitary bodies, as well as of all legislation (State and Federal), to give security to the public interests against this disease, which ranks floods and fire and all other sources of devastation in the certainty of its coming and in the powerlessness of the people before it, arises from a painful, helpless ignorance of its cause and the laws governing its origin and reproduction. Its fatality is but slightly affected or altered by medical treatment, the death-rate being determined rather by the degree of poisoning.

Science hitherto offers no practical defense against it, except in a quarantine, which to be reliable must be so perfect as to prevent evasion. This is so difficult of attainment that when a sporadic case occurs in one of our ports it is forthwith charged to an evasion of quarantine, and every effort made thus to explain its origin. When the disease extends to an interior city the difficulties in the way of a successful quarantine are greatly increased. We therefore pray a beneficent government to aid in dispelling this cloud of ignorance with the light of positive knowledge, if it be attainable, by stimulating observers, known and unknown the world over, with the hope of reward as well as of merited honor and distinction.

Positive knowledge upon all subjects pertaining to sanitary science, and on this one in particular, is the great desideratum. All measures of quarantine and internal hygiene, however judicious and forcible, are simply defensive in character and altogether indirect, and must of necessity remain so as long as directed against an unseen, intangible, and unknown entity protected by ignorance and clothed with mystery.

The discovery of only a single additional feature in the character or quality of this poison, or germ, or cause, of whatever nature or source, may reveal the secret of its prevention, destruction, or material modification, and thus place it in the power of sani-

tarians to disarm it as completely as vaccination does small-pox.

The aim of the present efficient quarantine, on which confidence mainly reposes, is to prevent its introduction; it may or may not confer practical immunity against the disease. Too much, however, should not be conceded to it, since the history of yellow fever shows that even when one far less efficient was in force, or virtually none at all, yellow fever has spared for years in succession the Gulf and Atlantic coasts. But, admitting all that its most sanguine advocates may claim for it, shall its enforcement be accepted as a perpetual duty and the limit of our resources; or, in imitation of the wise policy of other enlightened governments, shall we so legislate as to invite a knowledge of the *causa causans*, and thus possibly make precise for its destruction what is at present left solely to empirical observation? The problem is more pressing now than ever, because the railroad transportation of disease-germs has acquired equal dignity with their importation by ships, and thus the danger has been made co-equal with the railroad development of the Southern section.

The French and German cholera commissions now engaged in a philosophic and strictly scientific inquiry into the cause of Asiatic cholera, with a view to the arrest of this disease in its westward progress, may be referred to in this connection. One lesson is certainly taught by the example thus set to the world by France and Germany, namely, the folly of longer dependence upon empirical observation for protection against this subtile disease; the line of progress is the path of diligent research, fearlessly, faithfully made.

The British Parliament voted £30,000 to the immortal Jenner for the discovery of vaccination against the then greatest scourge to mankind. The prevention of small-pox by vaccination is indeed the greatest achievement of sanitary science known to the world; it was then seemingly as unattainable as the problem in hand may now appear. Who will dare say that a similar ultimate success may not attend the effort that you are solicited to further by a premium scarcely equal to the annual appropriation made for the maintenance of quarantine? The award is based upon the successful discovery of some certain means of preventing, destroying, or materially modifying the cause (known or unknown) of yellow fever. It is not offered for the successful treatment of yellow fever; that is a problem for the medical profession, who wish only to become the beneficiaries of whatever light, research promoted by your generous interest, may reveal. It is rather for the prevention of the disease, with all the beneficent results that are likely to follow to humanity and to commerce, that you are asked thus to legislate.

The amount specified is not large when the time, labor, and expense incident to such investigations are taken into consideration.

WM. H. DOUGHTY, M.D.

AUGUSTA, Ga., April 30, 1884.

GEORGIA MEDICAL SOCIETY, SAVANNAH, Ga., December 14, 1883.

Dear Sir: At a meeting of the Georgia Medical Society, held the evening of the 11th instant, the committee to whom was referred your papers and resolutions to memorialize Congress to appropriate a premium of $100,000 for the discovery of the cause of yellow fever, &c., reported for its indorsement, and the Society unanimously indorsed the same.

Very respectfully,

[SEAL.] JNO. M. JOHNSTON, M.D.,
Recording Secretary.

W. H. DOUGHTY, M.D., Augusta, Ga.

The above petition was read in meeting of the Board of Health of Augusta, Ga., and received its approval, and was ordered to be signed officially by the President and Secretary of said Board.

AUGUSTA, Ga., May 1, 1884.

[SEAL.] EUGENE FOSTER, M.D.,
President Board of Health, C. A.

Attest:

L. T. BLOME,
Secretary Board of Health, C. A.

This memorial was read before the Augusta Academy of Medicine, and received its unanimous indorsement. The President and Secretary were directed to append their official signatures.

AUGUSTA, Ga., May 9, 1884.

THEO. LAMB, M.D.,
President Augusta Academy Medicine.
WM. H. HARRISON, SR., M.D.,
Secretary Augusta Academy Medicine.

In consequence of the receipt of this petition, Mr. Brown introduced a bill, Senate 2281, which embodied its request.

ARMY MEDICAL DEPARTMENT BUILDING.

The Senate passed the following bill:

That the sum of $300,000 is hereby appropriated, out of any moneys in the Treasury not otherwise appropriated, for the purchase of a site and the erection in Washington of a brick and metal fire-proof building to be used for the safe-keeping of the records, library, and museum of the Surgeon-General's Office of the United States Army; and the building shall be constructed in accordance with plans and specifications provided by the Surgeon-General of the Army and approved by the Architect of the Capitol Extension; and the money hereby appropriated shall be expended under the direction and superintendence of the officer in charge of the State, War, and Navy Department building.

MEDICAL MATTERS BEFORE CONGRESS.

May 29, Mr. Riggs, of Illinois, reported from the Committee on Public Health a recommendation that the following resolution be referred to the Committee on Appropriations, which was so ordered:

Resolved, That the Committee on Appropriations of this House be, and they are hereby, instructed to include in the sundry civil appropriations for the year ending June 30, 1885, the following items:

"For the contingent epidemic fund to be at the disposal of the President and to be expended at his discretion, the sum of $200,000, including the unexpended balance of previous appropriations, amounting to $115,000.

"For the support of the National Board of Health the following sums:

"For pay and expenses of the members of the board, and for the investigation of questions affecting the public health, including the study of other diseases than small-pox, cholera, and yellow fever, $18,000.

"For rent, fuel, postage, telegraphing, printing, and all other miscellaneous expenses, $2,500.

"For disbursing agent, clerks, and messenger, $4,500; amounting in the aggregate to $25,000."

MISCELLANEOUS.

OFFICIAL NOTICE.

ANNUAL DUES from members of the Association—*Five Dollars* per annum—are payable directly to the Treasurer. Such payment entitles them to receive the JOURNAL of the Association for one year.

SUBSCRIPTIONS TO THE JOURNAL from those who are not members should be forwarded to the office of publication, Chicago.

BACK VOLUMES OF THE TRANSACTIONS may be procured, at reduced rates, by addressing the Treasurer.

THE INDEX to the 33 Volumes of Transactions will be forwarded, postpaid, on receipt of *One Dollar* by the Treasurer.

According to a resolution passed May 9, 1884, at the Washington meeting, continuous payment of Annual Dues is required, to retain permanent membership.

RICHARD J. DUNGLISON, M.D.,
Treasurer.

Lock Box 1274, Philadelphia, Pa.

NEW BOOKS.

Nettleship, E. The Student's Guide to Diseases of the Eye. 3d edition, with numerous additions. 12mo, 428 pp. London: Churchill. 7s. 6d.

Philpot, H. J. Diet System Three Tables, No. I, Diabetes, II, Gout; III, Dyspepsia. In cases. London: Low. 1s each.

Purser, J. M. A Manual of Histology and of Histological Methods. 12mo, 396 pp. London: Longmans. 5s.

Thudichum, J. L. W. Aids to Physiological Chemistry. 12mo, 114 pp. London: Bailliere. Sewed, 2s.

Whitehead, W., and Pollard, B. The Surgical Treatment of Tumors and other Obscure Conditions of the Bladder. 8vo. London: Churchill. 1s.

Kühne, W. Die motorische Nervenendigung, besonders nach Beobachtgn. an Muskelquerschnitten v. Dr. M. B van Syckel aus New York (Aus "Verhandlgn. d. naturhist.-med. Vereins zu Heidelberg.") 8vo, 9 pp. Heidelberg: C. Winter.

Lubarsch, O. Welche Berücksichtigung verlangen die Verdauungs u. Harnorgane Laparotomirter in der Nachbehandlung? Inaugural-Dissertation. 8vo, 56 pp., mit Tab. und 8 graph. Steintaf. Strassburg: Trübner.

LIST OF CHANGES IN THE STATIONS OF MEDICAL OFFICERS, U. S. NAVY, FOR THE WEEK ENDING JUNE 14, 1884.

P. A Surgeon A. A. Austin, detached from U. S. S. "St. Louis," ordered to Naval Rendezvous, Philadelphia.

P. A. Surgeon T. M. Edgar, detached from U. S. S. "Wabash," ordered to U. S S. "Nantucket"

P A. Surgeon L. B. Baldwin, ordered to U. S. S. "Wabash."

Assistant-Surgeon H W. Whitaker, detached from Naval Rendezvous, Phila., ordered for examination preliminary to promotion.

Assistant-Surgeon F. A. Hesler, ordered to U. S. S. "Minnesota."

Assistant-Surgeon V. C. B. Means, ordered to U. S S "Vermont."

Medical Director T. M. Browne, to attend the International Health Exhibition at Liverpool, Eng., and Delegate to International Medical Congress at Copenhagen, per steamer of July 2.

Surgeon I. R Tryon, to same duty, with Medical Director Browne, and on completion of this duty, to report for duty on U. S. S. "Quinnebaug."

Surgeon J. Hugg, detached from "Quinnebaug" on reporting of relief, to return home and report arrival.

OFFICIAL LIST OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT UNITED STATES ARMY, FROM JUNE 7, 1884, TO JUNE 14, 1884.

Middleton, Passmore, Captain and Assistant-Surgeon, leave of absence extended three months on surgeon's certificate of disability. (Par. 3, S. O. 134, A. G. O., June 10, 1884.)

Bennett, Richards, Captain and Assistant-Surgeon, assigned to duty as post surgeon, Mount Vernon Barracks, Ala. (Par. 2, S. O. 113, Hdqrs. Department East, June 9, 1884.)

Gardner, Edwin F., Captain and Assistant-Surgeon, relieved from duty at Fort Walla Walla, Wash. Terr., and assigned to duty as post surgeon, Fort Canby, Wash. Terr. (Par. 1, S. O. 75 Hdqrs. Department of Columbia, June 3, 1884.)

Cunningham, T. A., Captain and Assistant-Surgeon, ordered to relieve Assistant-Surgeon C. B. Byrne, U. S. A., from duty at Fort Lewis, Col., Assistant-Surgeon Byrne, when so relieved, to proceed to Fort Gibson, I. T., and report to the post commander for duty. (Par. 2, S. O 112, Hdqrs. Department of Mo., June 4, 1884.)

Banister, J. M., Captain and Assistant Surgeon, granted leave of absence for one month and 7 days, to commence June 13. (S. O. 22, Hdqrs. Division of the Atlantic, June 5, 1884.)

McCreery, Geo First Lieut. and Assistant-Surgeon, granted leave of absence for two months, with permission to apply to the Adjutant-General of the Army for two months's extension. (Par. 3, S. O. 56, Hdqrs. Division of Missouri, June 5, 1884.)

The Army Medical Examining Board, New York City, is dissolved, to take effect June 14, 1884.

Brown, Jos. B., Lieut-Colonel and Surgeon, upon completion of the business of the A. M. B., directed to comply with S. O. 44, current series, A. G. O., and return to New York City.

Clements, Bennett A., Major and Surgeon, directed to await orders in New York City.

Kimball, James P., Captain and Assistant-Surgeon, granted leave of absence for two months and 14 days, to take effect June 14, 1884, and ordered to relieve, August 28, 1884, Captain Robt. H. White, Assistant-Surgeon, from duty at U. S. Military Academy, West Point, New York.

Captain White, on being relieved, to report in person to the commanding general Department of Cal. for assignment to duty

Sternberg, Geo. M., Major and Surgeon, relieved from temporary duty in S G. O., and ordered to assume the duties of attending Surgeon and examiner of recruits, at Baltimore, Md. (S. O. 121, A. G. O., June 6, 1884.)

Finley, J. A., Captain and Assistant-Surgeon, relieved from duty at Fort Stockton, Texas, and assigned to duty as post surgeon, Fort Concho, Texas. (Par. 4, S. O. 69. Hdqrs. Department of Texas, June 2, 1884.)

OFFICERS OF

THE AMERICAN MEDICAL ASSOCIATION

AND OF ITS SEVERAL SECTIONS, 1884-5.

PRESIDENT.

Dr. H. F. CAMPBELL, of Augusta, Georgia.

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LIBRARIAN.

Dr. C. H. A. Kleinschmidt, Washington, D. C.

Place of meeting, 1885, New Orleans, La.; Time of holding meeting, last Tuesday in April.

COMMITTEE OF ARRANGEMENTS.

Samuel D. Logan, Chairman; S. E. Chaillé, E. S. Lewis, Joseph T. Scott, W. G. Austin, W. H. Watkins, J. P. Davidson, J. A. G. Fisher, Geo. W. Lewis, B. A. Pope, W. C. Wilson, M. Schuppert, Geo. J. Friedrichs, F. Loeber, D. Jamison, G. K. Pratt, L. F. Salomon, J. H. Bemiss, Geo. Lawrason, C. U. Gaudet, Sam'l M. Bemiss, C. J. Bickham, Chas. Turpin, Jno. Carter, A. W. DeRoaldes, S. S. Herrick, W. S. Mitchell, E. T. Shepard, E. Souchon, T. D. Layton, T. S. Dabney, S. R. Olliphant, Edward Harrison, A. B. Miles, Joseph Holt, P. B. McCutchon, F. H. Parham, G. B. Underhill, Stanhope Jones, E. Chassaignac, J. Dell'Orto.

ASSISTANT SECRETARY.

Dr. W. H. Watkins, New Orleans, Louisiana.

BOARD OF TRUSTEES FOR JOURNALIZING THE TRANSACTIONS.

Drs. J. M. Toner, Washington, D. C., President;
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"Oral and Dental Surgery."

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"State Medicine."

Chairman—Dr. E. W. Schaufler, Kansas City, Mo.; Sec'y—J. N. McCormick, Bowling Green, Ky.

Committee on "Necrology."

Chairman—Dr. J. M. Toner, Washington, D. C.

—THE—

Journal of the American Medical Association.

EDITED FOR THE ASSOCIATION BY N. S. DAVIS.

PUBLISHED WEEKLY.

VOL. II. CHICAGO, JUNE 28, 1884. No. 26.

AMERICAN MEDICAL ASSOCIATION.

PLAN OF ORGANIZATION FOR A NATIONAL MEDICAL ASSOCIATION.

Whereas, The Medical Convention, held in the city of New York, in May, 1846, have declared it expedient "for the medical profession of the United States to institute a National Medical Association;" and,

Inasmuch as an institution so conducted as to give frequent, united and emphatic expression to the views and aims of the medical profession in this country, must at all times have a beneficial influence, and supply more efficient means than have hitherto been available here for cultivating and advancing medical knowledge; for elevating the standard of medical education; for promoting the usefulness, honor and interests of the medical profession; for enlightening and directing public opinion in regard to the duties, responsibilities, and requirements of medical men; for exciting and encouraging emulation and concert of action in the profession, and for facilitating and fostering friendly intercourse between those who are engaged in it: therefore,

Be it resolved, In behalf of the medical profession of the United States, that the members of the Medical Convention held in Philadelphia in May 1847, and all others who, in pursuit of the objects above mentioned, are to unite with or succeed them, constitute a National Medical Association; and that for the organization and management of the same, they adopt the following *Regulations:*—

I.—TITLE OF THE ASSOCIATION.

This institution shall be known and distinguished by the name and title of "The American Medical Association."

II.—MEMBERS.

The members of this institution shall collectively represent and have cognizance of the common interests of the medical profession in every part of the United States; and shall hold their appointment to membership either as delegates from local institutions, as members by invitation, as permanent members, or members by application.

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, and the Marine Hospital Service of the United States.

Each delegate shall hold his appointment for one year, and until another is appointed to succeed him, and shall participate in all the business and affairs of the Association.

Each State, county and district medical society, entitled to representation, shall have the privilege of sending to the Association one delegate for every ten of its regular resident members, and one for every additional fraction of more than half that number; *Provided*, however, that the number of delegates from any particular State, Territory, county, city, or town shall not exceed the ratio of one in ten of the resident physicians who may have signed the Code of Ethics of this Association. The Medical Staffs of the Army and Navy shall be entitled to four delegates each. The Marine Hospital Service of the United States shall be entitled to one delegate.

No individual who shall be under sentence of expulsion or suspension from any State or local medical society of which he may have been a member, or whose name shall have been, for non-payment of dues, dropped from the rolls of the same, shall be received as a delegate to this Association, or be allowed any of the privileges of a member, until he shall have been relieved from the said sentence or disability by such State or local society, or shall have paid up all arrears of membership; nor shall any person not a member and supporter of a local medical society, where such a one exists, be eligible to membership in the American Medical Association.

No one expelled from this Association shall at any time thereafter be received as a delegate or member, unless by a three-fourths vote of the members present at the meeting to which he is sent, or at which he is proposed.

Members by Invitation shall consist of practitioners of reputable standing from sections of the United States not otherwise represented at the meeting. They shall receive their appointment by invitation of the meeting, after an introduction from, and being vouched for by, at least three of the members present, or three of the absent permanent members. They shall hold their connection with the Association until the close of the annual session at which they are received; and shall be entitled to participate in all its affairs, as in the case of delegates, except the right to vote.

The *Permanent Members* shall consist of all those who have served in the capacity of delegates, and of such other members as may receive the appointment by unanimous vote, and shall continue such so long as they remain in good standing in the body

from which they were sent as delegates, and comply with the requirements of the By-laws of the Association. Permanent members shall at all times be entitled to attend the meetings, and participate in the affairs of the Association, so long as they shall continue to conform to its regulations, but without the right of voting; and, when not in attendance, they shall be authorized to grant letters of introduction to reputable practitioners of medicine residing in their vicinity, who may wish to participate in the business of the meeting, as provided for members by invitation.

Members by Application shall consist of such members of State or county societies, certified to be in good standing by the president and secretary of said societies, as shall make application for admission. They shall simply have the right to receive the JOURNAL on the same terms as other members.

Every member elect, prior to the permanent organization of the annual meeting, or before voting on any question after the meeting has been organized, must exhibit his credentials to the proper committee, and sign these regulations, inscribing his name and address in full, specifying in what capacity he attends, and, if a delegate, the title of the institution from which he has received his appointment.

III.—MEETINGS.

The regular meetings of the Association shall be held annually. The place of meeting shall be determined, with the time of meeting for each next successive year, by vote of the Association.

IV.—OFFICERS.

The officers of the Association shall be a President, four Vice-Presidents, one Permanent and one Assistant Secretary, a Treasurer, and Librarian. They shall be nominated by a special committee of one member from each State represented at the meeting, and shall be elected by vote on a general ticket.

Each officer, except the Permanent Secretary, shall hold his appointment for one year, and until another is elected to succeed him. The Permanent Secretary shall hold his appointment until removed by death, resignation, or a vote of two-thirds of the members present at a regular annual meeting.

The Presidents and Vice-Presidents shall assume the functions of their respective offices at the beginning of the annual meeting next succeeding their election; all other officers shall enter upon their duties immediately after their election.

The President shall preside at the meetings, preserve order and decorum in debate, give a casting vote when necessary, and perform all the other duties that custom and parliamentary usage may require.

The Vice-Presidents, when called upon, shall assist the President in the performance of his duties, and during the absence, or at the request of the President, one of them shall officiate in his place.

The Permanent Secretary shall record the minutes and authenticate the proceedings; give due notice of the time and place of each next ensuing annual meeting; notify all members of committees of their appointment, and of the duties assigned to them; hold correspondence with other permanently organized medical societies, both domestic and foreign; serve as a member of the Committee of Publication; and carefully preserve the archives and unpublished transactions of the Association.

The Assistant Secretary shall aid the Permanent Secretary in recording and authenticating the proceedings of the Association; serve as a member of the Committee of Arrangements, and perform all the duties of Permanent Secretary temporarily whenever that office shall be vacant, either by death, resignation, or removal.

The Treasurer shall have the immediate charge and management of the funds and property of the Association. He shall be a member of the Committee of Publication, to which committee he shall give bonds for the safe keeping and proper use and disposal of his trust. And through the same committee he shall present his accounts, duly authenticated, at every regular meeting.

The Librarian shall receive and preserve all the property in books, pamphlets, journals, and manuscripts presented to or acquired by the Association, record their titles in a book prepared for the purpose, acknowledge the receipt of the same, and he shall be a member of the Committee of Publication.

V.—STANDING COMMITTEES.

The following standing committees, each composed of seven members, shall be organized at every annual meeting, for preparing, arranging, and expediting business for each next ensuing year, and for carrying into effect the orders of the Association not otherwise assigned, namely, a Committee of Arrangements and a Committee of Publication.

The Committee of Arrangements shall, if no sufficient reasons prevent, be mainly composed of seven members, of whom the Assistant Secretary shall be one, residing in the place at which the Association is to hold its next annual meeting; and shall be required to provide suitable accommodations for the meeting, to verify and report upon the credentials of membership, to receive and announce all essays and memoirs voluntarily communicated, either by members of the Association, or by others through them, and to determine the order in which such papers are to be read and considered.

The Committee of Publication, of which the Secretaries, Treasurer, and Librarian must constitute a part, shall have charge of preparing for the press, and of publishing and distributing such of the proceedings, transactions, and memoirs of the Association as may be ordered to be published in such manner as the Association may direct. The six members of this Committee, who have not the immediate management of the funds, shall also, in their own names as agents for the Association, hold the bond of the Treasurer for the faithful execution of his office, and shall annually audit and authenticate his accounts, and present a statement of the same in the annual report of the Committee; which report shall specify the character and cost of the publications of the Association during the year, the number of copies still at the disposal of the meeting, the funds on hand

for further operations, and the probable amount of the assessment to be laid on each member of the Association for covering its annual expenditures.

VI.—FUNDS AND APPROPRIATIONS.

Funds shall be raised by the Association for meeting its current expenses and awards from year to year, but never with the view of creating a permanent income from investments. Funds may be obtained by an equal assessment of not more than ten dollars annually, on each of the delegates and permanent members; by voluntary contributions for specific objects; and by the sale and disposal of publications, or of works prepared for publication.

The funds may be appropriated for defraying the expenses of the annual meetings, including the necessary expenses of the Permanent Secretary in maintaining the necessary correspondence of the Association; for publication; for enabling the Standing Committees to fulfill their respective duties, conduct their correspondence, and procure the materials necessary for the completion of their stated annual reports; for the encouragement of scientific investigation by prizes and awards of merit; and for defraying the expenses incidental to specific investigations under the instruction of the Association, where such investigations have been accompanied with an order on the Treasurer to supply the funds necessary for carrying them into effect.

VII.—PROVISION FOR AMENDMENT.

No amendment or alteration shall be made in any of these articles, except at the annual meeting next subsequent to that at which such amendment or alteration may have been proposed; and then only by the voice of three-fourths of all the delegates in attendance.

Provided, however, that when an amendment is properly under consideration, and an amendment is offered thereto, germane to the subject, it shall be in order, and if adopted, shall have the same standing and force as if proposed at the preceding meeting of the Association.

And, in acknowledgment of having adopted the foregoing propositions, and of our willingness to abide by them, and use our endeavors to carry into effect the objects of this Association as above set forth, we have hereunto affixed our names.

NAMES OF MEMBERS.	RESIDENCE.	INSTITUTION REPRESENTED.

BY-LAWS.

I.—ORDER OF BUSINESS.

The order of business at the annual meetings of the American Medical Association shall at all times be subject to the vote of three-fourths of all the members in attendance; and, until permanently altered, except when for a time suspended, it shall be as follows, namely:

1st. The calling of the meeting to order by the President elected the preceding year, or, in his absence, by one of the Vice-Presidents.

2d. The report of the Committee of Arrangements on the credentials of members, after the latter have registered their names and addresses, and the titles of the institutions which they represent.

3d. The reception of members by invitation.

4th. The election of permanent members.

5th. The reading of notes from absentees.

6th. The hearing of the annual address of the President.

7th. The reception of the reports of all special committees and voluntary communications, and their reference to the appropriate Sections.

8th. The appointment of the committee of one from each State represented, to nominate officers of the Association, and to fill the standing committees.

9th. The reading and consideration of the reports of the Standing Committees, of Publication, on Prize Essays, and of Chairmen of Sections.

10th. Resolutions introducing new business, and instructions to the permanent committees.

11th. The selection of the next place of meeting.

12th. The report of the Nominating Committee, and the election of officers of the Association.

13th. Reports from the several Sections.

14th. Reading of the minutes by the Secretary.

15th. Unfinished and miscellaneous business.

16th. Adjournment.

II.—SECTIONS.

The general meetings of the Association shall be restricted to the morning sessions; and the afternoon sessions, commencing at three o'clock, shall be devoted to the hearing of reports and papers and their consideration, in the following *Sections*:—

1. Practical Medicine, Materia Medica, and Physiology.
2. Obstetrics and Diseases of Women.
3. Surgery and Anatomy.
4. State Medicine.
5. Ophthalmology, Otology, and Laryngology.
6. Diseases of Children.
7. Dental and Oral Surgery.

The chairman and secretary of the several Sections shall, like other officers of the Association, be nominated by the special committe of one member from each State represented at the meeting, and elected by a vote on a general ticket. They shall hold their office until the close of the proper business of the annual meeting next succeeding their election, and until their successors are appointed.

The Section on State Medicine shall be composed of one member from each State, one from the army and one from the navy of the United States, 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 chairmen of the several Sections shall prepare and read in the general sessions of the Association, papers on the advances and discoveries of the past year in the branches of science included in their respective Sections; the reading of such papers not to occupy longer than forty minutes for each.

It shall be the duty of every member of the Association who proposes to present a paper or report to any one of the Sections, to forward either the paper, or a *title* indicative of its contents, and its *length*, to the Chairman of the Committee of Arrangements at least one month before the annual meeting at which the paper or report is to be read. It shall also be the duty of the Chairman and Secretary of each Section to communicate the same information to the Chairman of the Committee of Arrangements concerning such papers and reports as may come into their possession or knowledge, for their respective Sections, the same length of time before the annual meeting. And the Committee of Arrangements shall determine the order of reading or presentation of all such papers, and announce the same in the form of a programme for the use of all members attending the annual meeting. Such programme shall also contain the rules specified in the By-laws and Ordinances concerning the consideration and disposal of all papers in the Sections.

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 especially appointed for their examination. The sub-committees shall be allowed thirty days for such examination; 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 author of such papers, however, may read abstracts before the Section within the allotted twenty minutes. No member shall address the Section more than once upon the same subject, nor speak longer than fifteen minutes without unanimous consent.

All papers presented directly to the Association, and other matters, may, at the discretion of the Association, be referred to the various Sections for their consideration and report.

Prize Essays.—There shall be four annual prizes of two hundred and fifty dollars each, which shall be awarded at the close of the second year after announcement, as hereinafter explained, for strictly original contributions to medical and surgical progress.

It shall be the duty of the chairman of each of the following four Sections: 1. Practical Medicine, Materia Medica, and Physiology; 2. Obstetrics and Diseases of Women; 3. Surgery and Anatomy; 4. State Medicine, to appoint annually before the adjournment of the meeting of the Association three members of ability and good judgment, who shall constitute a Committee of Selection, and who shall, within thirty days thereafter, select and publicly announce for competitive investigation and report, a subject belonging to one or other of the branches of medicine included in the title of the Section.

It shall also be the duty of the chairman of each of the Sections mentioned to appoint annually a Committee of Award, consisting of three experts, who shall carefully examine the essays offered for competition, and, if any one shall be found worthy of the prize as a substantial contribution to medical knowledge, to recommend the same to the Association.

All essays placed by their authors for competition shall be in the hands of the chairmen of the respective Committees of award on or before the first day of January preceding the meeting of the Association at which the reports of the committees are required to be made.

All Prize Essays shall be considered as the property of the Association.

The names of the authors of the competing essays shall be kept secret from the committees by such means as the latter may provide.

Membership in either of the two committees shall not debar from membership in the other; nor shall membership in the Committee of Selection exclude a member from the privilege of offering a competing essay.

III.—STANDING COMMITTEES.

The following are the Standing Committees of the Association, to be filled by the Committee on Nominations, and to report at the next annual meeting subsequent to their appointment, namely, Committee of Arrangements, Committee of Publication, and Committee on American Medical Necrology.

The *Committee of Publication* shall append to each volume of the *Transactions* hereafter published, a copy of the Constitution, By-laws and Code of Ethics of the Association. It shall print conspicuously, at the beginning of each volume of the *Transactions* the following disclaimer, namely, The American Medical Association, although formally accepting and publishing the reports of the various standing committees, holds itself wholly irresponsible for the opinions, theories or criticisms therein contained, except when otherwise decided by special resolution.

The *Committee on American Medical Necrology* shall consist of one member for each State and Territory represented in the Association, whose duty it shall be to procure memorials of the eminent and worthy dead among the distinguished physicians of their respective States and Territories, and transmit them to the chairman of this committee on or before the 1st of April of each and every year.

IV.—THE PUBLICATION OF PAPERS AND REPORTS.

No report or other paper shall be entitled to publication in the volume for the year in which it shall be presented to the Association, unless it be placed in the hands of the Committee of Publication on or before the first day of July. It must also be so prepared as to require no material alteration or addition at the hands of its author.

Authors of papers are required to return their proofs within two weeks after their reception; otherwise they will be passed over and omitted from the volume.

Every paper received by this Association and ordered to be published, and all plates or other means of illustration, shall be considered the exclusive property of the Association, and shall be published and sold for the exclusive benefit of the Association.

The Committee of Publication shall have full discretionary power to omit from the published *Transactions*, in part or in whole, any paper that may be referred to it by the Association, or either of the

Sections, unless specially instructed to the contrary by vote of the Association.

V.—ASSESSMENTS.

The sum of five dollars shall be assessed, annually, upon each delegate to the sessions of the Association, as well as upon each of its permanent members, whether attending or not, for the purpose of raising a fund to defray necessary expenses. The payment of this sum shall be required of the delegates and members in attendance upon the sessions of the Association previously to their taking their seats and participating in the business of the sessions. Permanent members, not in attendance, shall transmit their dues to the Treasurer.

Any permanent member who shall fail to pay his annual dues for three successive years, unless absent from the country, shall be dropped from the roll of permanent members, after having been notified by the Secretary of the forfeiture of his membership.

VI.—DELEGATES FROM THE MEDICAL STAFFS OF THE ARMY AND NAVY.

Delegates representing the medical staffs of the United States Army and Navy, shall be appointed by the Chiefs of the Army and Navy Medical Bureaus. The number of delegates so appointed shall be four from the army medical officers, and an equal number from the navy medical officers.

VII.—DELEGATES TO FOREIGN MEDICAL SOCIETIES.

The President shall be authorized annually to appoint delegates to represent this Association at the meetings of the British Medical Association, the American Medical Society at Paris, and such other scientific bodies in Europe or other foreign countries as may be affiliated with us.

VIII.—DUTIES OF MEMBERS.

No one shall be permitted to address the Association, except he shall have first given his name and residence, which shall be distinctly announced from the chair, and the member may be required to go forward and speak from the stand, but not more than ten minutes at one time.

No one appointed on a special committee, who fails to report at the meeting next succeeding the one at which he is appointed, shall be continued on such committee, or appointed on any other, unless a satisfactory excuse is offered.

IX.—CONDITION EXCLUDING REPRESENTATION.

No State or Local Medical Society, or other organized institution, shall be entitled to representation in this Association that has not adopted its Code of Ethics; or that has intentionally violated or disregarded any article or clause of the same.

X.—OF THE PREVIOUS QUESTION.

When the previous question is demanded, it shall take at least twenty members to second it; and when the main question is put under force of the previous question and negatived, the question shall remain under consideration the same as if the previous question had not been enforced.

XI.—JUDICIAL COUNCIL.

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 on 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.

XII.—NEW BUSINESS.

No new business, resolutions by members, etc., shall be introduced at the general session of the Association except on the first and fourth days of meetings.

XIII.—OFFICERS AND COMMITTEES.

In the election of officers and appointment of committees by this Association and its President, they shall be confined to members and delegates present at the meeting, except in the Committee of Arrangements.

ORDINANCES.

Resolved, That the several Sections of this Association be requested, in the future, to refer no papers or reports to the Committee of Publication, except such as can be fairly classed under one of the three following heads, namely: 1. Such as may contain and establish *positively* new facts, modes of practice, or principles of real value. 2. Such as may contain the results of well-devised original experimental researches. 3. Such as present so complete a review of the facts on any particular subject as to enable the writer to deduce therefrom legitimate conclusions of importance.

Resolved, That the several sections be requested, in the future, to refer all such papers as may be presented to them for examination by this Association, that contain matter of more or less value, and yet cannot be fairly ranked under either of the heads mentioned in the foregoing resolution, back to their authors with the recommendation that they be published in such regular medical periodicals as said authors may select, with the privilege of placing at the head of such papers, "Read to the Section of the American Medical Association on the day of 18 ." (Vide *Transactions*, vol. xvi. p. 40.)

Resolved, That, instead of yearly reprinting the

list of members of the American Medical Association, the Committee of Publication be instructed to prepare and print in the *Transactions* an alphabetical catalogue triennially, containing a complete list of the Permanent Members, with their names in full, designating their residences, the year of their admission, the offices they may have held in the Association, and, in case of death or rejection, the date thereof. (Vide *Transactions*, vol. xvii. p. 33.)

Resolved, That no report or other paper shall be presented to this Association unless it be so prepared that it can be put at once into the hands of the Permanent Secretary, to be transmitted to the Committee of Publication. (Vide *Transactions*, vol. xvii. p. 27.)

Resolved, That the Permanent Secretary hereafter and from this date be authorized to draw a warrant upon the Treasurer for the expenses incurred in his attendance upon each session of the Association, and that the Treasurer is hereby instructed to pay the same. (Vide *Transactions*, vol. xviii. p. 42.)

Resolved, That the faculties of the several medical colleges of the United States be recommended to announce explicitly in their annual announcements, circulars and advertisements that they will not receive certificates of time of study from irregular practitioners, and that they will not confer the degree upon any one who may acknowledge his intention to practice in accordance with any exclusive system. (Vide *Transactions*, vol. xix. p. 31.)

Resolved, That those gentlemen who desire to report on special subjects, and will pledge themselves to report at the next meeting, be requested to send their names, and the subjects on which they desire to report, to the Permanent Secretary. (Vide *Transactions*, vol. xix. p. 42.)

Resolved, That hereafter the necessary expenses for rent of hall for general meetings and rooms for sections to accommodate the annual meetings, and the necessary expenses for cards of membership, be paid out of the treasury of the Association. (Vide *Transactions*, vol. xix. p. 42.)

Resolved, That each State Medical Society be requested to prepare an annual register of all the regular practitioners of medicine in their respective States, giving the names of the college in which they may have graduated, and date of diploma or license. (Vide *Transactions*, vol. xx. p. 20.)

Resolved, That this Association recognizes specialties as proper and legitimate fields of labor.

Resolved, That specialists shall be governed by the same rules of professional etiquette as have been laid down for general practitioners.

Resolved, That it shall not be proper for specialists publicly to advertise themselves such, or to assume any title not specially granted by a regularly chartered college.

Resolved, That private handbills addressed to members of the medical profession, or by cards in medical journals, calling the attention of professional brethren to themselves as specialists, be declared in violation of the Code of Ethics of the American Medical Association. (Vide *Transactions*, vol. xx. p. 28.)

Resolved, That a Committee of one be appointed, residing at Washington, to render the Librarian of Congress such assistance as the interests of the Association may require. (Vide *Transactions*, vol. xx. p. 29.)

Whereas, The proper construction of Art. IV., Sec. 1, Code of Ethics, A. M. A., having been called for, relative to consultation with irregular practitioners who are graduates of regular schools.

Resolved, That said Art. IV., Sect. 1, Code of Ethics, excludes all such practitioners from recognition by the regular profession. (Vide *Transactions*, vol. xx. p. 30.)

Resolved, That if any member fail to reply for more than one year to the circular sent to him by the Committee of Publication he shall forfeit his right to the volume, and it shall revert to the Association, to be sold to any applicant at the current rates. (Vide *Transactions*, vol. xxi. p. 30.)

Resolved, That the Committee of Arrangements for the next ensuing meeting of this Association, and for all meetings thereafter, be directed to prepare a list of members present on a separate roll, for convenience and accuracy in calling the ayes and nays when the same shall be demanded. (Vide *Transactions*, vol. xxi. p. 60.)

Resolved, That each year, until otherwise ordered, the President-elect and the Permanent Secretary be directed to appeal in the name of the Association, to the authorities of each State where no State Board of Health exists, urging them to establish such boards. (Vide *Transactions*, vol. xxvi. p. 50.)

Resolved, That the Permanent Secretary is hereby directed annually to report the names of States where boards of health exist, and also of those which decline to establish them; said report to form a part of the annual proceedings of the Association. (Vide *Transactions*, vol. xxvi. p. 50.)

Resolved, That members of the medical profession who in any way aid or abet the graduation of medical students in irregular or exclusive systems of medicine, are deemed thereby to violate the spirit of the ethics of the American Medical Association. (Vide *Transactions*, vol. xxvii. p. 48.)

Resolved, 1. That the American Medical Association adopts the International Metric System, and will use it in its Transactions. (Vide *Transactions*, vol. xxx. p. 44.)

2. Requests that those who present papers at its future meetings employ this system in their communications, or reprints thereof. (Vide *Transactions*, vol. xxx. p. 44.)

3. Requests the medical boards of the hospitals and dispensaries to adopt the Metric System in prescribing and recording cases; and that the Faculties of the medical and pharmaceutic schools adopt it in their didactic, clinical, or dispensing departments. (Vide *Transactions*, vol. xxx. p. 44.)

Resolved, That the President and Secretary of this Association are directed to annually petition Congress to enact a law which shall permit every person engaged in a scientific pursuit to import for his own use, free of duty, any one book or instrument appertaining to his special pursuit. (Vide *Transactions*, vol. xxx. p. 45.)

Resolved, That the above-named officers are further directed to urge the State Medical Societies and their auxiliary branches to aid this Association in accomplishing this purpose, by petitions to Congress, and by otherwise influencing Congressmen. (Vide *Transactions*, vol. xxx. p. 45.

Decision by Judicial Council: A gentleman who is not in affiliation with a County, District, or State Medical Society, where such organizations exist, is *not* entitled to be registered as a permanent member upon the claim of having been a delegate from a body not now entitled to representation in this body. (Vide *Transactions*, vol. xxx. p. 57.)

Resolved: First. That a committee of five be appointed by the President of the Association, to be called the Standing Committee on "Atmospheric Conditions, and their relations to the Prevalence of Diseases."

Second. That that committee be authorized to select such places as will best indicate atmospheric conditions in the more important climatic and sanitary districts of the United States—not less than six, nor more than twelve—and establish therefor a means for continuous observation and record of all appreciable conditions of atmosphere, according to the most approved methods, and of the origin and prevalence of all acute diseases.

Third. That the Committee, through their chairman, be authorized to draw upon the Treasurer of this Association for such sums as may be found necessary for the proper execution of the work assigned to it, the aggregate amount not to exceed $500, during the ensuing year, and that a detailed report of all sums drawn and expenditures made must be presented at the next annual meeting of the Association. (Vide *Transactions*, vol. xxxii. p. 35.)

CODE OF MEDICAL ETHICS.

OF THE DUTIES OF PHYSICIANS TO THEIR PATIENTS, AND OF THE OBLIGATIONS OF PATIENTS TO THEIR PHYSICIANS.

ART. I.—*Duties of physicians to their patients.*

§ 1. A physician should not only be ever ready to obey the calls of the sick, but his mind ought also to be imbued with the greatness of his mission, and the responsibility he habitually incurs in its discharge. These obligations are the more deep and enduring, because there is no tribunal other than his own conscience to adjudge penalties for carelessness or neglect. Physicians should, therefore, minister to the sick with due impressions of the importance of their office; reflecting that the ease, the health, and the lives of those committed to their charge, depend on their skill, attention, and fidelity. They should study, also, in their deportment, so to unite *tenderness* with *firmness*, and *condescension* with *authority*, as to inspire the minds of their patients with gratitude, respect, and confidence.

§ 2. Every case committed to the charge of a physician should be treated with attention, steadiness, and humanity. Reasonable indulgence should be granted to the mental imbecility and caprices of the sick. Secrecy and delicacy, when required by peculiar circumstances, should be strictly observed; and the familiar and confidential intercourse to which physicians are admitted in their professional visits, should be used with discretion, and with the most scrupulous regard to fidelity and honor. The obligation of secrecy extends beyond the period of professional services; none of the privacies of personal and domestic life, no infirmity of disposition or flaw of character observed during professional attendance should ever be divulged by the physician except when he is imperatively required to do so. The force and necessity of this obligation are indeed so great, that professional men have, under certain circumstances, been protected in their observance of secrecy by courts of justice.

§ 3. Frequent visits to the sick are in general requisite, since they enable the physician to arrive at a more perfect knowledge of the disease—to meet promptly every change which may occur, and also tend to preserve the confidence of the patient. But unnecessary visits are to be avoided, as they give useless anxiety to the patient, tend to diminish the authority of the physician, and render him liable to be suspected of interested motives.

§ 4. A physician should not be forward to make gloomy prognostications, because they savor of empiricism, by magnifying the importance of his services in the treatment or cure of the disease. But he should not fail, on proper occasions, to give to the friends of the patient timely notice of danger when it really occurs; and even to the patient himself, if absolutely necessary. This office, however, is so peculiarly alarming when executed by him, that it ought to be declined whenever it can be assigned to any other person of sufficient judgment and delicacy. For the physician should be the minister of hope and comfort to the sick; that, by such cordials to the drooping spirit, he may smooth the bed of death, revive expiring life, and counteract the depressing influence of those maladies which often disturb the tranquillity of the most resigned in their last moments. The life of a sick person can be shortened not only by the acts, but also by the words or the manner of a physician. It is, therefore, a sacred duty to guard himself carefully in this respect, and to avoid all things which have a tendency to discourage the patient and to depress his spirits.

§ 5. A physician ought not to abandon a patient because the case is deemed incurable; for his attendance may continue to be highly useful to the patient, and comforting to the relatives around him, even in the last period of a fatal malady, by alleviating pain and other symptoms, and by soothing mental anguish. To decline attendance, under such circumstances, would be sacrificing to fanciful delicacy and mistaken liberality, that moral duty which is independent of, and far superior to, all pecuniary consideration.

§ 6. Consultations should be promoted in difficult

or protracted cases, as they give rise to confidence, energy, and more enlarged views in practice.

§ 7. The opportunity which a physician not unfrequently enjoys of promoting and strengthening the good resolutions of his patients, suffering under the consequences of vicious conduct, ought never to be neglected. His counsels, or even remonstrances, will give satisfaction, not offense, if they be proffered with politeness, and evince a genuine love of virtue, accompanied by a sincere interest in the welfare of the person to whom they are addressed.

ART. II.—*Obligations of patients to their physicians.*

§ 1. The members of the medical profession, upon whom is enjoined the performance of so many important and arduous duties toward the community, and who are required to make so many sacrifices of comfort, ease, and health, for the welfare of those who avail themselves of their services, certainly have a right to expect and require, that their patients should entertain a just sense of the duties which they owe to their medical attendants.

§ 2. The first duty of a patient is to select as his medical adviser one who has received a regular professional education. In no trade or occupation do mankind rely on the skill of an untaught artist; and in medicine, confessedly the most difficult and intricate of the sciences, the world ought not to suppose that knowledge is intuitive.

§ 3. Patients should prefer a physician whose habits of life are regular, and who is not devoted to company, pleasure, or to any pursuit incompatible with his professional obligations. A patient should, also, confide the care of himself and family, as much as possible, to one physician: for a medical man who has become acquainted with the peculiarities of constitution, habits, and predispositions of those he attends, is more likely to be successful in his treatment than one who does not possess that knowledge.

A patient who has thus selected his physician should always apply for advice in what may appear to him trivial cases, for the most fatal results often supervene on the slightest accidents. It is of still more importance that he should apply for assistance in the forming stage of violent diseases; it is to a neglect of this precept that medicine owes much of the uncertainty and imperfection with which it has been reproached.

§ 4. Patients should faithfully and unreservedly communicate to their physician the supposed cause of their disease. This is the more important, as many diseases of a mental origin simulate those depending on external causes, and yet are only to be cured by ministering to the mind diseased. A patient should never be afraid of thus making his physician his friend and adviser; he should always bear in mind that a medical man is under the strongest obligations of secrecy. Even the female sex should never allow feelings of shame or delicacy to prevent their disclosing the seat, symptoms, and causes of complaints peculiar to them. However commendable a modest reserve may be in the common occurrences of life, its strict observance in medicine is often attended with the most serious consequences, and a patient may sink under a painful and loathsome disease, which might have been readily prevented had timely intimation been given to the physician.

§ 5. A patient should never weary his physician with a tedious detail of events or matters not appertaining to his disease. Even as relates to his actual symptoms, he will convey much more real information by giving clear answers to interrogatories, than by the most minute account of his own framing. Neither should he obtrude upon his physician the details of his business nor the history of his family concerns.

§ 6. The obedience of a patient to the prescriptions of his physician should be prompt and implicit. He should never permit his own crude opinions as to their fitness to influence his attention to them. A failure in one particular may render an otherwise judicious treatment dangerous, and even fatal. This remark is equally applicable to diet, drink, and exercise. As patients become convalescent, they are very apt to suppose that the rules prescribed for them may be disregarded, and the consequence, but too often, is a relapse. Patients should never allow themselves to be persuaded to take any medicine whatever, that may be recommended to them by the self-constituted doctors and doctresses who are so frequently met with, and who pretend to possess infallible remedies for the cure of every disease. However simple some of their prescriptions may appear to be, it often happens that they are productive of much mischief, and in all cases they are injurious, by contravening the plan of treatment adopted by the physician.

§ 7. A patient should, if possible, avoid even the *friendly visits of a physician* who is not attending him—and when he does receive them, he should never converse on the subject of his disease, as an observation may be made, without any intention of interference, which may destroy his confidence in the course he is pursuing, and induce him to neglect the directions prescribed to him. A patient should never send for a consulting physician without the express consent of his own medical attendant. It is of great importance that physicians should act in concert; for, although their modes of treatment may be attended with equal success when applied singly, yet conjointly they are very likely to be productive of disastrous results.

§ 8. When a patient wishes to dismiss his physician, justice and common courtesy require that he should declare his reasons for so doing.

§ 9. Patients should always, when practicable, send for their physician in the morning, before his usual hour of going out; for, by being early aware of the visits he has to pay during the day, the physician is able to apportion his time in such a manner as to prevent an interference of engagements. Patients should also avoid calling on their medical adviser unnecessarily during the hours devoted to meals or sleep. They should always be in readiness to receive the visits of their physician, as the detention of a few minutes is often of serious inconvenience to him.

§ 10. A patient should, after his recovery, entertain a just and endearing sense of the value of the services rendered him by his physician; for these are

of such a character, that no mere pecuniary acknowledgment can repay or cancel them.

OF THE DUTIES OF PHYSICIANS TO EACH OTHER, AND TO THE PROFESSION AT LARGE.

ART. I.—*Duties for the support of professional character.*

§ 1. Every individual, on entering the profession, as he becomes thereby entitled to all its privileges and immunities, incurs an obligation to exert his best abilities to maintain its dignity and honor, to exalt its standing, and to extend the bounds of its usefulness. He should, therefore, observe strictly such laws as are instituted for the government of its members; should avoid all contumelious and sarcastic remarks relative to the faculty as a body; and while, by unwearied diligence, he resorts to every honorable means of enriching the science, he should entertain a due respect for his seniors, who have, by their labors, brought it to the elevated condition in which he finds it.

§ 2. It is not in accord with the interests of the public or the honor of the profession that any physician or medical teacher should examine or sign diplomas or certificates of proficiency for, or otherwise be specially concerned with, the graduation of persons whom they have good reason to believe intend to support and practice any exclusive and irregular system of medicine.

§ 3. There is no profession, from the members of which greater purity of character, and a higher standard of moral excellence are required, than the medical; and to attain such eminence is a duty every physician owes alike to his profession and to his patients. It is due to the latter, as without it he cannot command their respect and confidence, and to both, because no scientific attainments can compensate for the want of correct moral principles. It is also incumbent upon the faculty to be temperate in all things, for the practice of physic requires the unremitting exercise of a clear and vigorous understanding; and, on emergencies, for which no professional man should be unprepared, a steady hand, an acute eye, and an unclouded head may be essential to the well-being, and even to the life, of a fellow-creature.

§ 4. It is derogatory to the dignity of the profession to resort to public advertisements, or private cards, or handbills, inviting the attention of individuals affected with particular diseases — publicly offering advice and medicine to the poor gratis, or promising radical cures; or to publish cases and operations in the daily prints, or suffer such publications to be made; to invite laymen to be present at operations, to boast of cures and remedies, to adduce certificates of skill and success, or to perform any other similar acts. These are the ordinary practices of empirics, and are highly reprehensible in a regular physician.

§ 5. Equally derogatory to professional character is it for a physician to hold a patent for any surgical instrument or medicine; or to dispense a secret *nostrum*, whether it be the composition or exclusive property of himself or of others. For, if such nostrum be of real efficacy, any concealment regarding it is inconsistent with beneficence and professional liberality; and if mystery alone give it value and importance, such craft implies either disgraceful ignorance or fraudulent avarice. It is also reprehensible for physicians to give certificates attesting the efficacy of patent or secret medicines, or in any way to promote the use of them.

ART. II.—*Professional services of physicians to each other.*

§ 1. All practitioners of medicine, their wives, and their children while under the paternal care, are entitled to the gratuitous services of any one or more of the faculty residing near them, whose assistance may be desired. A physician afflicted with disease is usually an incompetent judge of his own case; and the natural anxiety and solicitude which he experiences at the sickness of a wife, a child, or any one who, by the ties of consanguinity, is rendered peculiarly dear to him, tend to obscure his judgment, and produce timidity and irresolution in his practice. Under such circumstances, medical men are peculiarly dependent upon each other, and kind offices and professional aid should always be cheerfully and gratuitously afforded. Visits ought not, however, to be obtruded officiously; as such unasked civility may give rise to embarrassment, or interfere with that choice on which confidence depends. But, if a distant member of the faculty, whose circumstances are affluent, request attendance, and an honorarium be offered, it should not be declined; for no pecuniary obligation ought to be imposed, which the party receiving it would wish not to incur.

ART. III.—*Of the duties of physicians as respects vicarious offices.*

§ 1. The affairs of life, the pursuit of health, and the various accidents and contingencies to which a medical man is peculiarly exposed, sometimes require him temporarily to withdraw from his duties to his patients, and to request some of his professional brethren to officiate for him. Compliance with this request is an act of courtesy, which should always be performed with the utmost consideration for the interest and character of the family physician, and when exercised for a short period, all the pecuniary obligations for such service should be awarded to him. But if a member of the profession neglect his business in quest of pleasure and amusement, he cannot be considered as entitled to the advantages of the frequent and long-continued exercise of this fraternal courtesy, without awarding to the physician who officiates, the fees arising from the discharge of his professional duties.

In obstetrical and important surgical cases, which give rise to unusual fatigue, anxiety and responsibility, it is just that the fees accruing therefrom should be awarded to the physician who officiates.

ART. IV.—*Of the duties of physicians in regard to consultations.*

§ 1. A regular medical education furnishes the only presumptive evidence of professional abilities and acquirements, and ought to be the only acknowledged right of an individual to the exercise and honors of his profession. Nevertheless, as in consultations the

good of the patient is the sole object in view, and this is often dependent on personal confidence, no intelligent regular practitioner, who has a license to practice from some medical board of known and acknowledged respectability, recognized by this Association, and who is in good moral and professional standing in the place in which he resides, should be fastidiously excluded from fellowship, or his aid refused in consultation, when it is requested by the patient. But no one can be considered as a regular practitioner or a fit associate in consultation, whose practice is based on an exclusive dogma, to the rejection of the accumulated experience of the profession, and of the aids actually furnished by anatomy, physiology, pathology and organic chemistry.

§ 2. In consultations, no rivalship or jealousy should be indulged; candor, probity and all due respect should be exercised toward the physician having charge of the case.

§ 3. In consultations, the attending physician should be the first to propose the necessary questions to the sick; after which the consulting physician should have the opportunity to make such further inquiries of the patient as may be necessary to satisfy him of the true character of the case. Both physicians should then retire to a private place for deliberation; and the one first in attendance should communicate the directions agreed upon to the patient or his friends, as well as any opinions which it may be thought proper to express. But no statement or discussion of it should take place before the patient or his friends, except in the presence of all the faculty attending, and by their common consent; and no *opinions* or *prognostications* should be delivered which are not the result of previous deliberation and concurrence.

§ 4. In consultations, the physician in attendance should deliver his opinion first; and when there are several consulting, they should deliver their opinions in the order in which they have been called in. No decision, however, should restrain the attending physician from making such variations in the mode of treatment as any subsequent unexpected change in the character of the case may demand. But such variation, and the reasons for it, ought to be carefully detailed at the next meeting in consultation. The same privilege belongs also to the consulting physician if he is sent for in an emergency, when the regular attendant is out of the way, and similar explanations must be made by him at the next consultation.

§ 5. The utmost punctuality should be observed in the visits of physicians when they are to hold consultations together, and this is generally practicable, for society has been considerate enough to allow the plea of a professional engagement to take precedence of all others, and to be an ample reason for the relinquishment of any present occupation. But as professional engagements may sometimes interfere, and delay one of the parties, the physician who first arrives should wait for his associate a reasonable period, after which the consultation should be considered as postponed to a new appointment. If it be the attending physician who is present, he will, of course, see the patient and prescribe; but if it be the consulting one, he should retire, except in case of emergency, or when he has been called from a considerable distance, in which latter case he may examine the patient, and give his opinion in *writing*, and *under seal*, to be delivered to his associate.

§ 6. In consultations, theoretical discussions should be avoided, as occasioning perplexity and loss of time. For there may be much diversity of opinion concerning speculative points, with perfect agreement in those modes of practice which are founded, not on hypothesis, but on experience and observation.

§ 7. All discussions in consultation should be held as secret and confidential. Neither by words nor manner should any of the parties to a consultation assert or insinuate that any part of the treatment pursued did not receive his assent. The responsibility must be equally divided between the medical attendants—they must equally share the credit of success as well as the blame of failure.

§ 8. Should an irreconcilable diversity of opinion occur when several physicians are called upon to consult together, the opinion of the majority should be considered as decisive; but if the numbers be equal on each side, then the decision should rest with the attending physician. It may, moreover, sometimes happen that two physicians cannot agree in their views of the nature of a case, and the treatment to be pursued. This is a circumstance much to be deplored, and should always be avoided, if possible, by mutual concessions, as far as they can be justified by a conscientious regard for the dictates of judgment. But in the event of its occurrence, a third physician should, if practicable, be called to act as umpire; and, if circumstances prevent the adoption of this course, it must be left to the patient to select the physician in which he is most willing to confide. But, as every physician relies upon the rectitude of his judgment, he should, when left in the minority, politely and consistently retire from any further deliberation in the consultation, or participation in the management of the case.

§ 9. As circumstances sometimes occur to render a *special consultation* desirable, when the continued attendance of two physicians might be objectionable to the patient, the member of the faculty whose assistance is required in such cases should sedulously guard against all future unsolicited attendance. As such consultations require an extraordinary portion of both time and attention, at least a double honorarium may be reasonably expected.

§ 10. A physician who is called upon to consult, should observe the most honorable and scrupulous regard for the character and standing of the practitioner in attendance; the practice of the latter, if necessary, should be justified as far as it can be, consistently with a conscientious regard for truth, and no hint or insinuation should be thrown out which could impair the confidence reposed in him, or affect his reputation. The consulting physician should also carefully refrain from any of those extraordinary attentions or assiduities which are too often practiced by the dishonest for the base purpose of gaining applause, or ingratiating themselves into the favor of families and individuals.

ART. V.—*Duties of physicians in cases of interference.*

§ 1. Medicine is a liberal profession, and those admitted into its ranks should found their expectations of practice upon the extent of their qualifications, not on intrigue or artifice.

§ 2. A physician, in his intercourse with a patient under the care of another practitioner, should observe the strictest caution and reserve. No meddling inquiries should be made — no disingenuous hints given relative to the nature and treatment of his disorder; nor any course of conduct pursued that may directly or indirectly tend to diminish the trust reposed in the physician employed.

§ 3. The same circumspection and reserve should be observed when, from motives of business or friendship, a physician is prompted to visit an individual who is under the direction of another practitioner. Indeed, such visits should be avoided, except under peculiar circumstances; and when they are made, no particular inquiries should be instituted relative to the nature of the disease, or the remedies employed, but the topics of conversation should be as foreign to the case as circumstances will admit.

§ 4. A physician ought not to take charge of or prescribe for a patient who has recently been under the care of another member of the faculty in the same illness, except in cases of sudden emergency, or in consultation with the physician previously in attendance, or when the latter has relinquished the case, or been regularly notified that his services are no longer desired. Under such circumstances, no unjust and illiberal insinuations should be thrown out in relation to the conduct or practice previously pursued, which should be justified as far as candor and regard for truth and probity will permit; for it often happens that patients become dissatisfied when they do not experience immediate relief, and, as many diseases are naturally protracted, the want of success, in the first stage of treatment, affords no evidence of a lack of professional knowledge and skill.

§ 5. When a physican is called to an urgent case, because the family attendant is not at hand, he ought, unless his assistance in consultation be desired, to resign the care of the patient to the latter immediately on his arrival.

§ 6. It often happens in cases of sudden illness, or of recent accidents and injuries, owing to the alarm and anxiety of friends, that a number of physicians are simultaneously sent for. Under these circumstances, courtesy should assign the patient to the first who arrives, who should select from those present any additional assistance that he may deem necessary. In all such cases, however, the practitioner who officiates should request the family physician, if there be one, to be called, and, unless his further attendance be requested, should resign the case to the latter on his arrival.

§ 7. When a physician is called to the patient of another practitioner, in consequence of the sickness or absence of the latter, he ought, on the return or recovery of the regular attendant and with the consent of the patient, to surrender the case.

[The expression, "patient of another practitioner," is understood to mean a patient who may have been under the charge of another practitioner at the time of the attack of sickness, or departure from home of the latter, or who may have called for his attendance during his absence or sickness, or in any other manner given it to be understood that he regarded the said physician as his regular medical attendant.]

§ 8. A physician, when visiting a sick person in the country, may be desired to see a neighboring patient who is under the regular direction of another physician, in consequence of some sudden change or aggravation of symptoms. The conduct to be pursued on such an occasion is to give advice adapted to present circumstances; to interfere no further than is absolutely necessary with the general plan of treatment; to assume no future direction unless it be expressly desired; and, in this last case, to request an immediate consultation with the practitioner previously employed.

§ 9. A wealthy physician should not give advice *gratis* to the affluent; because his doing so is an injury to his professional brethren. The office of a physician can never be supported as an exclusively beneficent one; and it is defrauding, in some degree, the common funds for its support, when fees are dispensed with which might justly be claimed.

§ 10. When a physician who has been engaged to attend a case of midwifery is absent, and another is sent for, if delivery is accomplished during the attendance of the latter, he is entitled to the fee, but should resign the patient to the practitioner first engaged.

ART. VI.—*Of differences between physicians.*

§ 1. Diversity of opinion and opposition of interest may, in the medical as in other professions, sometimes occasion controversy and even contention. Whenever such cases unfortunately occur, and cannot be immediately terminated, they should be referred to the arbitration of a sufficient number of physicians or a *court-medical.*

§ 2. As peculiar reserve must be maintained by physicians toward the public, in regard to professional matters, and as there exist numerous points in medical ethics and etiquette through which the feelings of medical men may be painfully assailed in their intercourse with each other, and which cannot be understood or appreciated by general society, neither the subject-matter of such differences nor the adjudication of the arbitrators should be made public, as publicity in a case of this nature may be personally injurious to the individuals concerned, and can hardly fail to bring discredit on the faculty.

ART. VII.—*Of pecuniary acknowledgments.*

Some general rules should be adopted by the faculty, in every town or district, relative to *pecuniary acknowledgments* from their patients; and it should be deemed a point of honor to adhere to these rules with as much uniformity as varying circumstances will admit.

OF THE DUTIES OF THE PROFESSION TO THE PUBLIC, AND OF THE OBLIGATIONS OF THE PUBLIC TO THE PROFESSION.

ART. I.—*Duties of the profession to the public.*

§ 1. As good citizens, it is the duty of physicians to be ever vigilant for the welfare of the community, and to bear their part in sustaining its institutions and burdens; they should also be ever ready to give counsel to the public in relation to matters especially appertaining to their profession, as on subjects of medical police, public hygiene, and legal medicine. It is their province to enlighten the public in regard to quarantine regulations; the location, arrangement, and dietaries of hospitals, asylums, schools, prisons, and similar institutions; in relation to the medical police of towns, as drainage, ventilation, etc.; and in regard to measures for the prevention of epidemic and contagious diseases; and when pestilence prevails, it is their duty to face the danger, and to continue their labors for the alleviation of the suffering, even at the jeopardy of their own lives.

§ 2. Medical men should also be always ready, when called on by the legally constituted authorities, to enlighten coroners' inquests and courts of justice on subjects strictly medical—such as involve questions relating to sanity, legitimacy, murder by poisons or other violent means, and in regard to the various other subjects embraced in the science of Medical Jurisprudence. But in these cases, and especially where they are required to make a *postmortem* examination, it is just, in consequence of the time, labor, and skill required, and the responsibility and risk they incur, that the public should award them a proper honorarium.

§ 3. There is no profession by the members of which eleemosynary services are more liberally dispensed than the medical, but justice requires that some limits should be placed to the performance of such good offices. Poverty, professional brotherhood, and certain of the public duties referred to in the first section of this article, should always be recognized as presenting valid claims for gratuitous services; but neither institutions endowed by the public or by rich individuals, societies for mutual benefit, for the insurance of lives or for analogous purposes, nor any profession or occupation, can be admitted to possess such privilege. Nor can it be justly expected of physicians to furnish certificates of inability to serve on juries, to perform militia duty, or to testify to the state of health of persons wishing to insure their lives, obtain pensions, or the like, without a pecuniary acknowledgment. But to individuals in indigent circumstances, such professional services should always be cheerfully and freely accorded.

§ 4. It is the duty of physicians, who are frequent witnesses of the enormities committed by quackery, and the injury to health and even destruction of life caused by the use of quack medicines, to enlighten the public on these subjects, to expose the injuries sustained by the unwary from the devices and pretensions of artful empirics and impostors. Physicians ought to use all the influence which they may possess, as professors in Colleges of Pharmacy, and by exercising their option in regard to the shops to which their prescriptions shall be sent, to discourage druggists and apothecaries from vending quack or secret medicines, or from being in any way engaged in their manufacture and sale.

ART. II.—*Obligations of the public to physicians.*

§ 1. The benefits accruing to the public, directly and indirectly, from the active and unwearied beneficence of the profession, are so numerous and important, that physicians are justly entitled to the utmost consideration and respect from the community. The public ought likewise to entertain a just appreciation of medical qualifications; to make a proper discrimination between true science and the assumptions of ignorance and empiricism; to afford every encouragement and facility for the acquisition of medical education,—and no longer to allow the statute-books to exhibit the anomaly of exacting knowledge from physicians, under a liability to heavy penalties, and of making them obnoxious to punishment for resorting to the only means of obtaining it.

LIST OF DELEGATES AND MEMBERS.

THE FOLLOWING IS THE OFFICIAL LIST OF DELEGATES AND MEMBERS IN ATTENDANCE UPON THE ANNUAL MEETING OF THE AMERICAN MEDICAL ASSOCIATION IN WASHINGTON, MAY 6-7-8-9, 1884.

ALABAMA.

State Medical Society.—Jerome Cochran, Augustus Jordan Reese.

Bullock County Medical Society.—Charles H. Franklin.

Mobile County Medical Society.—George Augustus Ketchum.

Permanent Member.—James Marshall Collier.

ARKANSAS.

State Medical Society.—John R. Dale, James A. Dibrell, David C. Ewing, P. O. Hooper, James Thomas Jelks, R. G. Jennings, James M. Keller, Thos. E. Murrell, W. N. Yates.

CALIFORNIA.

State Medical Society.—F. W. Hatch.

Alameda County Medical Association.—Frank Howard Payne.

COLORADO.

State Medical Society.—Charles Denison, Jesse Hawes.

CONNECTICUT.

State Medical Society.—C. W. Chamberlain, Frederick L. Dibbel, Horace S. Fuller, Stephen G. Hubbard, S. W. Rockwell, James Welsh, Frank Hamilton Whittemore, Francis J. Young.

Fairfield County Medical Society.—Curtis H. Bill, S. T. De La Mater, Andrew W. Lyons, George L. Porter.

Hartford County Medical Society.—E. P. Swasey, Wm. A. M. Wainwright.

Middlesex County Medical Society.—Moses C. Hazel, Sylvester W. Turner.

New Haven County Medical Society.—Walter L. Barber, Lewis Barnes, Frank E. Caster, Michael A. Cremin, Gustavus Eliot, Walter Hamlin Holmes, Chas. A. Lindley, Matthew C. O'Connor, Charles S. Rodman.

New London County Medical Society.—Francis N. Braman.

Tolland County Medical Society.—Elbridge K. Leonard.

Windham County Medical Society.—Emory H. Davis, Edwin A. Hill, John Bryden Kent.

Permanent Members.—George R. Shepherd, W. W. Welch, W. C. Wile.

DAKOTA TERRITORY.

Cass County Medical Society.—Hector Galloway.

DELAWARE.

State Medical Society.—Hiram A. Burton, Lewis P. Bush, Robert G. Ellegood, R. S. W. Hirous, James A. Hopkins, William Marshall, Read J. McKay, Charles H. Richards, Albert Whiteley.

DISTRICT OF COLUMBIA.

Medical Association of District of Columbia.—Thos. Antisell, Walter C. Briscoe, J. R. Bromwell, Leon L. Friederich, Henry Davidson Fry, Walter W. Godding, Daniel R. Hagner, James F. Hartigan, Raymond T. Holden, W. W. Johnston, Louis Mackall, Hamilton E. Leach, Thomas Eugene McArdle, Edward Martin Schaeffer, Thomas C. Smith, William O. Taylor, Lachlan Tyler, John Hepburn Yarnall.

Permanent Members.—George N. Acker, Samuel S. Adams, Preston H. Bailhache, Howard H. Barker, Jedediah H. Baxter, John Shaw Billings, Charles V. Boarman, John Mills Browne, John W. Bulkley, Samuel C. Busey, James M. Flint, Chas. Wm. Franzoni, Alex. Y. P. Garnett, Albert Leary Gihon, Wm. H. Gobrecht, Charles Evelyn Hagner, John B. Hamilton, Flodoardo Howard, Franck Hyatt, Joseph Taber Johnson, C. H. A. Kleinschmidt, William Lee, Nathan Smith Lincoln, James W. H. Lovejoy, George Lloyd Magruder, W. V. Marmion, Ethelbert Carroll Morgan, James E. Morgan, DeWitt C. Patterson, Gideon S. Palmer, Armistead Peter, D. Webster Prentiss, S. J. Radcliffe, Robert Reyburn, J. O. Stanton, J. Ford Thompson, Joseph M. Toner, Ralph Walsh, Geo. Wm. West.

FLORIDA.

State Medical Society.—R. B. Burroughs.

GEORGIA.

State Medical Society.—J. W. Bailey, Robert Battey, Henry Frazier Campbell, Elijah Lewis Connally, Benjamin Robert Dostor, Eugene Foster, James A. Gray, J. B. Hankins, Wm. F. Holt, Daniel H. Howell, A. J. Logan, Henry McHatton, T. O. Powell, Columbus D. Smith, Wm. B. Wells, A. Grattan Whitehead.

Permanent Member.—Ely K. Bozeman.

ILLINOIS.

State Medical Society.—Edmund Andrews, G. M. Chamberlin, Frederick Cole, E. P. Cook, Lucinda H. Corr, N. S. Davis, Caleb DuHadway, B. M. Griffith, Benjamin H. Harris, John H. Hollister, C. C. Hunt, Ellen A. Ingersoll, Joseph L. Kitchen, Newton S. Read, George H. Tebo, Robert Tilley, Washington West.

Northern Central (Illinois) Medical Society.—John B. Felker, Isaac W. Fink.

Southern Illinois Medical Society.—Augustus De Foe, Thomas G. Hickman, W. R. Mackenzie, Henry J. Peavler.

Adams County Medical Society.—Moses F. Bassett, William A. Byrd, Charles Wesley Rook.

Æsculapian Society.—W. H. McNary.

Aurora Medical Society.—Daniel S. Jenks.

Brainard District Medical Society.—Robert N. Barger, S. T. Hurst.

Champaign County Medical Society.—Levi S. Wilcox.

Chicago Medical Society.—Philip Adolphus, W. W. Allport, Frank Billings, Truman W. Brophy, Albert H. Burr, Eggleston Burrows, Henry T. Byford, Wm. E. Clarke, John H. Chew, Alexander H. Cooke, S. Charles DeVeny, A. W. Harlan, Marcus P. Hatfield, E. Fletcher Ingals, A. Reeves Jackson, John S. Marshall, Truman W. Miller, Liston Homer Montgomery, Charles T. Parkes, Sarah Hackett Stevenson, Adelbert H. Tagert, J. F. Todd, Wm. Porter Verity, Jane E. Walton.

Cook County Medical Society.—Charles J. Simons.

Fox River Valley Medical Society.—Catharine B. Slater.

McLean County Medical Society.—N. B. Cole, Thos. F. Worrell.

Macoupin County Society for Medical Improvement.—Marinus W. Seaman.

Military Tract Medical Society.—Herbert Judd, Milton L. Knowles.

Morgan County Medical Society.—G. V. Black, Thomas J. Pitner, Arthur E. Prince.

Peoria City Medical Society.—Anna S. Adams.

Will County Medical Society.—William M. Richards.

Winnebago County Medical Association.—Silas A. Austin, Edward P. Catlin, L. A. Clark.

Permanent Members.—J. Y. Campbell, John W. Cowden, Moses Gunn, Walter Hay, S. J. Jones, John H. Rauch, William R. Shinn, Chas. Gilman Smith, Lemuel Tibbets, Edwin R. Willard.

INDIANA.

State Medical Society.—Ferdinand W. Beard, W. J. Boyden, Louis O. Carson, Joshua Chitwood, Timothy B. Cox, Joseph Eastman, Elijah S. Elder, Vincent H. Gregg, M. H. Harding, Thomas B. Harvey, James F. Hibberd, N. P. Howard, Jr., G. W. H. Kemper, Thomas M. Kyle, C. B. Miller, Gonzalva Cordova Smythe, George Sutton, J. E. Taylor, W. M. Terrill, L. D. Waterman, John C. Webster, John B. Weever, Jacob R. Weist, William N. Wishard.

Blackford County Medical Society.—Henry C. Davisson, Calvin Shull.

Boone County Medical Society.—Carter H. Smith.

Clinton County Medical Society.—James S. McMurray, S. O. Knapp.

Dearborn County Medical Society.—William C. Henry, Edward D. Freeman, Andrew J. Bower.

Delaware County Medical Society.—Samuel V. Jump, Robert Winton, Joseph Ross.

Gibson County Medical Society.—Wm. G. Kidd, S. E. Munford.

Grant County Medical Society.—Wm. Lomax.

Hancock County Medical Society.—Warren R. King.

Henry County Medical Society.—William F. Boor, George W. Burke.

Huntington County Medical Society.—Andrew J. Boswell, B. H. B. Grayston.

Jackson County Medical Society.—Samuel H. Charttan.

Kosciusko County Medical Society.—Irvin J. Becknell, J. H. Davisson, Irvin B. Webber.

Madison County Medical Society.—Jonas Stewart.

Marion County Medical Society.—J. A. Sutcliffe, Green V. Woolen, Jas. Livingston Thompson, John J. Garver, John Chambers.

Miami County Medical Society.—E. M. Bloomfield.

Montgomery County Medical Society.—Oliver H. Jones, S. W. Purviance.

Noble County Medical Society.—Norman Teal.

Owen County Medical Society.—Frank M. Niles.

Pulaski County Medical Society.—Geo. W. Thompson.

Randolph County Medical Society.—Lewis N. Davis.

Rush County Medical Society.—Charles H. Parsons, Marshall Sexton.

Steuben County Medical Society.—Theodore F. Wood, H. D. Wood.

Tippecanoe County Medical Society.—Moses Baker, George F. Beasley, Luther M. Irvin, Robert M. O'Ferrall, William S. Walker.

Vanderburgh County Medical Society.—Charles E. Lining, Edward Murphy.

Vigo County Medical Society.—Stephen J. Young.

Wabash County Medical Society.—Ebenezer F. Donaldson, Perry G. Moore, Oren O'Neal, Andrew J. Smith.

Permanent Members.—Geo. L. Andrews, Robert P. Davis, Wm. M. Holten, N. P. Howard, Sr., Joseph Intzi, John E. Link, Wm. Lomax, R. C. Rice, Landon C. Rose.

IOWA.

State Medical Society.—Homer O. Bates, J. A. Blanchard, A. B. Brackett, R. S. Brice, James Carson, Elmer F. Clapp, Elbert W. Clark, D. W. Crouse, Geo. D. Darnall, Joseph M. Emmert, O. T. Gillett, Sanford T. Goodman, Henry W. Hart, Thomas M. Hedges, Geo. P. Hanawalt, E. C. Heilman, A. J. Hobart, C. M. Hobby, Henry C. Huntsman, Eugene A. Kegley, John M. Knott, John W. Mitchell, Washington F. Peck, Horace Bascom Ransom, Allen A. Rawson, Ephraim M. Reynolds, R. C. Rice, John S. Roome, W. H. Ward, Ira L. Welch, John S. Whitley, D. H. Worthington, J. W. Young.

Central District Medical Society.—Robert R. Williams, Arthur L. Wright.

Eastern District Medical Society.—H. Cushman.

Northern Iowa Medical Society.—Norman L. Kean.

Southwestern Iowa Society of Physicians and Surgeons.—Hiram Irving Nance.

Cedar Rapids Medical Society.—W. M. Skinner, Joseph H. Weller.

Cedar Valley Medical Society.—Amos Babcock.

Clinton County Medical Society.—H. M. McKenzie, M. C. Osborn.

Council Bluffs Medical Society.—J. H. Cleaver.

Delaware County Medical Society.—S. N. Bixby.

Des Moines Valley Medical Society.—Charles G. Lewis, Henry B. Young.

Dubuque Medical Society.—John E. Bready, George Minges.

Fayette County Medical Society.—Charles C. Parker.

Guthrie District Medical Society.—Jacob R. Dosh.

Jackson County Medical Society.—Geo. O. Johnson, David N. Loose.

Johnson County Medical Society.—John Clinton Shrader.

Louisa County Medical Society.—B. G. Kimmel, H. S. Rogers.

Marion County Medical Society.—Jas. H. Auld, Wm. E. Wright.

Muscatine County Society of Physicians and Surgeons.—Elbridge H. King.

Polk County Medical Society.—A. G. Field, Spencer M. Rice, A. C. Simonton, D. W. Smouse.

VanBuren County Medical Society.—Thos. Gillmore McClure.

Permanent Members.—Edward L. Baker, Thomas H. Barnes, Lewis Blanchard, Asa B. Bowers, B. E. Brockhausen, Wm. C. Davis, Albert A. Deering, P. J. Farnsworth, Joseph C. Hughes, Jonathan H. Kersey, Chas. Henry Lothrop, Stephen C. Robinson, D. W. Smouse, C. H. Smith, Fred. M. Ward.

KANSAS.

State Medical Society.—R. D. Adams, B. Aikman, J. Bell, F. F. Dickman, H. O. Hanawalt, V. G. Miller, Chas. V. Mottram, W. L. Schenck, D. W. Stormont.

East Kansas District Medical Society.—J. B. Britton.

Permanent Member.—B. E. Fryer.

KENTUCKY.

State Medical Society.—T. B. Greenley, J. N. McCormack, Anselm D. Price, Dudley S. Reynolds, W. H. Wathen.

Central Kentucky Medical Association.—Hankins Brown, John Lewis Price.

Southwestern Kentucky Medical Association.—John G. Brooks, Joseph W. Thompson.

LOUISIANA.

State Medical Society.—Thomas S. Dabney.

New Orleans Medical Association.—M. Schuppert.

Orleans Parish Medical Society.—Geo. J. Friederichs.

Permanent Member.—Tobias G. Richardson.

MAINE.

State Medical Society.—Augustus P. Duelley, Theodore L. Estabrook, Thos. A. Foster, Alonzo Garcelon, Hampton E. Hill, Cyrus Kendrick, Daniel E. Marston, Andrew Mitchell Peables, Horatio N. Small, Frederick Charles Thayer, Charles E. Webster, Milton C. Wedgwood.

Permanent Members.—Andrew J. Fuller, Seth C. Gordon, Albion P. Snow.

MARYLAND.

Medical and Chirurgical Faculty.—B. Bernard Brown, T. Barton Brown, Frank Donaldson, W. Stump Forwood, James E. Gibbons, Jacob H. Hartman, Thomas M. Healey, Christopher Johnston, Thos. S. Latimer, Charles G. W. MacGill, Thomas Opie, G. Lane Taneyhill, W. Chas. Van Bibber.

Allegheny Medical Association.—William H. McCormick, D. P. Welfley.

Baltimore Medical and Surgical Society.—Daniel Webster Cathell, J. W. C. Cuddy, A. Friedenwald, Geo. W. Hamill, Wm. N. Hill, Chas. Hampson Jones, Benj. F. Leonard, John S. Lynch, Wm. H. Norris, E. M. Reid, Henry T. Rennolds.

Baltimore Medical Association.—Augustus F. Erich, Thos. A. Ashby, John Morris, John Neff, Walter Wyman.

Baltimore Academy of Medicine.—Chas. Carroll Bombaugh, Denis I. McKew, Richard McSherry, John R. Uhler.

Clinical Society of Maryland.—John W. Chambers, Eugene F. Cordell, George H. Rohé, Joseph T. Smith, James A. Stewart.

Cecil County Medical Society.—Samuel Thomas Roman.

Permanent Members.—John J. C. Caldwell, L. M. Eastman, Thomas B. Evans, William Lee, J. H. Scarff, Wm. A. B. Sellman, Jas. Carey Thomas, Claude Van Bibber, William Whitridge.

MASSACHUSETTS.

State Medical Society.—J. F. A. Adams, Z. Boylston Adams, Edward C. Briggs, James B. Brewster, Wm. Terence Carolin, Benj. S. Codman, Robert T. Davis, James A. Dow, Wm. A. Dunn, Jerome Dwelly, Reginald Heber Fitz, Lorenzo Smith Fox, George M. Garland, Michael F. Gavin, John Henry Gilman, John Alexander Gordon, Douglass Graham, John Lewis Hildreth, Wm. H. Hildreth, Howland Holmes, Franklin H. Hooper, John H. Jackson, Frederick I. Knight, Wm. D. Lamb, Marcus B. Leonard, John Howell Mackie, Henry O. Marcy, Wm. M. Mercer, Ernest P. Miller, J. L. Miller, A. Mitchell Orcutt, Moses Greeley Parker, George Howard Malcolm Rowe, Ira Russell, Charles A. Savory, Frederic Cheever Shattuck, Edmund H. Stevens, John B. Taylor, Frederick Henry Thompson, Levi Farr Warner, Charles Everett Warren, Emory L. White, Horace C. White, Jacob L. Williams, Arthur H. Wilson.

Essex North District.—Oliver S. Lovejoy, George Montgomery, John F. Young.

Middlesex North District.—Herbert Perry Jefferson.

Middlesex South District.—Albert L. Norris.

Norfolk District.—Chas. C. Toner.

Plymouth District.—Benjamin Hubbard.

Suffolk District.—Edward H. Bradford, Asa F. Pattee.

North Worcester District.—Edward A. Sawyer.

Permanent Members.—Robert Foster Andrews, Vincent Yardley Bowditch, Theodore W. Fisher, Edgar Dwight Hill, Alfred F. Holt, David W. Miner, Austin Wilbur Sidney.

MICHIGAN.

State Medical Society.—Henry Brooks Baker, Lyman W. Bliss, Wm. F. Breakey, William Brodie, Carl Brumme, William E. Burtless, Leartus Connor, C. C. Dellenbaugh, Simeon S. French, William R. Gifford, Joseph B. Griswold, George K. Johnson, Amos Knight, Donald Maclean, Theodore A. McGraw, Alva W. Nichols, Foster Pratt, Geo. E. Ranney, Robert Stephenson, Horace Tupper, Columbus V. Tyler.

Southern Michigan Medical Society.—Anson R. Smart, Louis H. Wertz.

West Michigan Medical Society.—Willard N. Smart.

Calhoun County Medical Society.—Harry D. Thomason.

Clinton County Medical Society.—Louis W. Fasquelle.

Detroit Medical and Library Association.—Ernest L. Shurley, Eugene Smith, Henry O. Walker.

Detroit Academy of Medicine.—Jas. F. Noyes, Frederick Austin Spaulding.

Medical Association of Eaton and Barry Counties.—Hiram Walter.

Flint Academy of Medicine.—Henry R. Case, Henry Carlton Fairbank.

Grand Rapids Medical Society.—Ezra E. Hebburd.

Wayne County Medical Society.—Henry F. Lyster, Edward S. Snow.

Permanent Members.—Gertrude S. Banks, William J. Herdman, John F. Jenkins, John H. Kellogg, Thomas Noble Reynolds, Hal. C. Wyman.

MINNESOTA.

State Medical Society.—Frank A. Blackman, John F. Fulton, A. W. Giddings, Charles N. Hewitt, Charles Hill, Daniel Leasure, John H. Murphy, C. A. Wheaton, W. K. Whittemore.

Minneapolis Physicians and Surgeons.—Charles N. Hunter,

Ramsey County Medical Society.—Talbot Jones, W. W Mayo.

Permanent Members.—A. A. Noyes, Alexander J. Stout.

MISSISSIPPI.

State Medical Society.—Burwell A. Duncan.

Permanent Member.—A. G. Smythe.

MISSOURI.

State Medical Society.—John H. Duncan, John W. Jackson.

Northwest Missouri Medical Society.—George C. Catlett, N. Fred. Essig, James W. Heddens.

Jackson County Medical Society.—T. B. Lester, Flavel B. Tiffany.

Kansas City Medical Society.—N. N. Horton, Edward W Schauffler, A. B. Sloan, Simeon S. Todd, John H. Van Eman.

Linton District Medical Society.—Wesley Humphrey.
Marion County Medical and Surgical Association.—Joseph C. Hearne.
Moberly District Medical Society.—B. G. Dysart, Thomas Irwin.
Pettis County Medical Society.—Willis P. King.
Saline County Medical Society.—C. Lester Hall.
St. Louis Medical Society.—LeGrand Atwood, Washington E. Fischel, Robert J. Flitt, R. M. Jordan, John S. Moore, James M. Scott.
St. Louis Medico-Chirurgical Society.—Geo. J. Engleman, Robert M. Funkhausen, Gratz A. Moses, T. F. Prewitt.
Permanent Members.—George Halley, W. B. Outten, S. Pollak.

NEBRASKA.

State Medical Society.—Frederick N. Dick, F. 'G. Fuller, Wellington S. Gibbs, S. D. Mercer, Richard C. Moore, John Windsor Rawlins, Adam H. Sowers.

NEW HAMPSHIRE.

State Medical Society.—David S. Clark, Granville P. Conn, Mary Shepherd Danforth, Eli Edwin Graves, L. W. Jones, George S. Love, John Edwin Mason, Nathaniel H. Merriam, Joseph W. Odell, John W. Parsons, Winslow B. Porter, Abel Parker Richardson, Thomas B. Sanborn, Irving A. Watson.
White Mountain Medical Society.—Joseph L. Patten.
Permanent Member.—P. A. Stackpole.

NEW JERSEY.

State Medical Society.—Geo. Bayles, Dowling Benjamin, Henry G. Cooke, D. A. Currie, H. W. Elmer, Denman B. Ingersoll, William R. Little, B. A. Watson, George T. Welch, James H. Wikoff.
Atlantic County Medical Society.—Boardman Reed.
Burlington County Medical Society.—Joseph Parrish, Alexander Marcy Sr., Samuel C. Thornton.
Camden County Medical Society.—William Albert Davis, John W. Douges, Onan B. Gross, Wm. H. Ireland.
Essex County Medical Society.—E. F. Smith, James T. Wrightson.
Gloucester County Medical Society.—Henry G. Buckingham.
Hudson County Medical Society.—Isaac N. Quimby.
Middlesex County Medical Society.—Wm. V. Wilson.
Passaic County Medical Society.—John Quin.
Sussex County Medical Society.—C. K. Davison, J. Miller.
Permanent Member.—Theodore R. Varick.

NEW YORK.

State Medical Association.—Judson B. Andrews, Edward N. Brush, Darwin Colvin, Clayton M. Daniels, Henry D. Didama, William Giltis, Joseph C. Greene, Desault Guernsey, B. L. Hovey, Nathaniel C. Husted, Jos. C. Hutchison, Frederick Hyde, Edward G. Janeway, John K. Leaning, U. Colvin Lynde, Edward M. Moore, Joseph W. Moore, Thos. D. Strong, William S. Tremaine, Wm. D. Woodend.
Chemung County Medical Society.—Chas. W. Brown, C. M. Spalding.
Columbus County Medical Society.—John C. Buchanan.
Erie County Medical Society.—Albert H. Briggs, Alphonse Dagenais, Thos. M. Johnson, C. C. Wyckoff.
New York Academy of Medicine.—John Glover Adams, James H. Anderson, William Nelson Blakeman, F. H. Bosworth, Nathan Bozeman, Chas. Stedman Bull, John Call Dalton, Frederick L. Dennis, Austin Flint, Jr., Joel Foster, J. W. S. Gouley, Caspar Griswold, F. H. Hamilton, John H. Hinton, Frederick E. Hyde, Edward A. Judson, W. T. Lusk, Richard C. M. Page, Samuel S. Purple, Lewis Albert Sayre, Gouverneur M. Smith, J. Lewis Smith, Isaac E. Taylor, William H. Welch, Francis V. White, William T. White, Chas. S. Wood.
New York County Medical Association.—R. L. Miranda, Samuel W. Smith.
Onondaga County Medical Society.—John W. Brown, Amos S. Edwards, George A. Edwards, Alfred Mercer, Hiram Wiggins.
Ontario County Medical Society.—Cassius O. Jackson.
Rensselaer County Medical Society.—Charles S. Allen, D. D. Bucklin, E. D. Ferguson, R. D. Traver.
Sullivan County Medical Society.—W. W. Appley.
Union Medical Association of Vermont and New York Counties.—Wm. Wotkyns Seymour.
Washington County Medical Society.—A. J. Long.
Wayne County Medical Society.—John Franklin Mains.
West Chester County Medical Society.—Edward F. Brush.
Permanent Members.—Edward Ames, A. N. Bell, George H. Bennett, Reed B. Bontecou, J. H. Hobart Burge, Ephraim Cutter, Albert G. Ellinwood, Thomas M. Flandran, Patrick H. Flood, Peter Y. Frye, J. O. Hannam, Morris H. Henry, Robert Newman, Henry N. Porter, W. W. Potter, Ira B. Read, W. H. Robb, John O. Roe, James M. Rose, John P. Sharer, Henry M. Silver, Joseph T. Smith, George T. Stevens, James R. Taylor, D. B. Whitney.

NORTH CAROLINA.

State Medical Society.—Eugene Grissom, Charles James O'Hagan, James Daniel Roberts, F. M. Rountree, Thomas F. Wood.

OHIO.

State Medical Society.—D. D. Bramble, George A. Collamore, Howard Culbertson, James A. Duncan, E. W. Howard, E. H. Hyatt, Ben S. Leonard, John A. Murphy, Wm. J. Scott, X. C. Scott, Edwin Sinnett, Joseph T. Woods.
Northeast Ohio Medical Association.—William Snowden Battle, Amos B. Fuller, R. Harvey Reed, A. W. Ridenour, James D. Robison, George L. Stair.
Northern Central Ohio Medical Association.—Benj. Franklin Harvey, Hiram R. Kelly, Frank C. Larimore, Isaac A. Myers, W. H. Sykes.
Northwestern Ohio Medical Association.—A. Hurd, W. W. Jones, Jonathan B. Vail.
Brown County Academy of Medicine.—Wm. W. Ellsberry, Thos. Winslow Gordon.
Butler County Medical Society.—Dan. Millikin.
Clark County Medical Society.—John M. Buckingham.
Columbiana and Adjoining Counties Medical Society.—Jacob Bossert.
Champaigne County Medical Society.—Samuel M. Mosgrove.
Cincinnati Academy of Medicine.—Julia W. Carpenter, John L. Cleveland, Phineas Sanborn Conner, James M. French, Archibald E. Heighway, William W. Seely, C. O. Wright, James T. Whittaker, Gustav Zinke.
Cincinnati Medical Society.—C. G. Comegys, Nathaniel P. Dandridge, B. P. Goode, O. D. Norton, Jr., Wm. H. Taylor.
Cuyahoga County Medical Society.—Henry Z. Gill, J. M. Lathrop, H. G. Sherman.
Defiance County Medical Society.—W. S. Powell.
Delamater Medical Society.—Albert N. Read.
Erie County Medical Society.—Charles Graefe.
Hempstead Academy of Medicine.—Edwin S. Ricketts.
Holmes County Medical Society.—Simon P. Wise.
Mahoning County Medical Society.—Robert D. Gibson.
Miami County Medical Society.—J. Frank Gabriel.
Miami Valley Medical Association.—Gustave L. Kriegh.
Montgomery County Medical Society.—Alfred H. Stephens.
Portage County Medical Society.—Alexander W. Alcorn, Aaron M. Sherman.
Preble County Medical Society.—Jacob D. Haynie.
Ross County Medical Society.—Gustavus Scott Franklin.
Toledo Medical Society.—Oshea S. Brighan, Harrison Hathaway.
Trumbull County Medical Society.—F. Caspar.
Tuscarawas County Medical Society.—S. L. McCurdy.
Wayne County Medical Society.—A. B. Ferris, Hugh H. Hart, Eli D. Pocock, Joseph H. Todd.
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LIBRARIAN'S REPORT.

WASHINGTON, D. C., MAY 8, 1884.

Mr. President:—I have the honor to present the accompanying catalogue of additions made to this library by donations, exchange and subscription during the past year. It will be seen from the catalogue that since my last report 249 distinct titles have been added, including forty volumes of Transactions, Reports of hospitals, boards of health and volumes of medical journals not previously received and catalogued as such. The library thus increased, now contains 2,066 distinct titles, comprehending about 6,000 volumes, including pamphlets.

This rapid growth during the past year, which is in striking contrast with that of former years, is due mainly, if indeed not altogether, to the publication of the JOURNAL of the Association, to which books are sent for review and thus reach the library. But, while the increase in the number as well as value of the publications reaching its shelves is very gratifying, it at the same time has led to overcrowding of the space now at its command, and hence is greatly in need of better accommodations than are now afforded in one of the towers of the Smithsonian Institution, if ever it is to become useful to the members of the Association and to the profession at large. I would therefore respectfully recommend that a committee be appointed for the purpose of devising means by which this collection, so rapidly growing in point of numbers as well as value, may be housed in quarters better adapted to the purposes of a library.

I also respectfully recommend that the home and foreign exchanges be continued and, wherever possible, increased; that $200 be placed at the disposal of the Librarian, to be expended for the purpose of binding and purchase of periodicals, proceedings and transactions to complete sets already in our possession; also, that the subscription of $50 to the Index Medicus be continued for the present calendar year, and under the same conditions as have obtained heretofore.

In conclusion, I desire to express my thanks to the Editor of the JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION for the active part taken in building up the library by the prompt and regular transmission to me of books, pamphlets, journals, etc., sent to him for review or as exchanges.

Respectfully submitted,

C. H. A. KLEINSCHMIDT, M.D., *Librarian.*

3113 N. St., Washington, D. C.

SOME CURIOUS MORTALITY STATISTICS.—Dr. William Pratt, of London, in his address to young men, gives these facts: According to statistics, the married life is not only the purer, producing the minimum of evil-doers and criminals, but it is also by far the most healthy. Take the male sex, and it is seen that from twenty-five to thirty years of age, 1,000 married men furnish 6 deaths; 1,000 bachelors furnish 10 deaths; 1,000 widowers furnish 22 deaths. The figures, however, become very unfavorable if the marriage be contracted before twenty. Out of 8,000 young men married before twenty, their mortality has been found to be, before marriage, only 7 per 1,000; after marriage, 50 per 1,000. With respect to the female sex we find a similar advantage of marriage over celibacy, but on the same condition. If young girls be turned into wives before twenty a like mortality befalls them which befalls the other sex. Everywhere young married people from eighteen to twenty years of age die as fast as old people from sixty to seventy years of age. The common sense and common law of Western Europe have with perfect justice marked twenty-one as the age of maturity. After that epoch, however, marriage should be contracted as soon as practicable. It is the healthiest and the happiest life; the best for the individual and for the community.

REMARKABLE INSTANCES OF APHASIA.—Brown-Sequard, in the *Société de Biologie*, referred to a case of aphasia where the individual only had three words at his command, yet he sang admirably, and while singing made use of the words of the song. A physician in Cincinnati, who is suffering from aphasia, talks in his sleep at night. A third case is able to speak when delirious.

THE

Journal of American Medical Association.

PUBLISHED WEEKLY.

THE EDITOR of this JOURNAL would be glad to receive any items of general interest in regard to local events, or matters that it is desirable to call to the attention of the profession. Letters written for publication or containing items of information, should be accompanied by the writer's full name and address, although not necessarily to be published. All communications in regard to editorial work should be addressed to the Editor.

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Address

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No. 65 RANDOLPH STREET,
CHICAGO, ILLINOIS

SATURDAY, JUNE 28, 1884.

CLOSE OF THE VOLUME AND OF THE FIRST YEAR.—The present number of the JOURNAL completes the second volume, and closes the first year of its publication. In accordance with the By-laws and Regulations of the American Medical Association it contains, besides the title page and full index to the volume, the Constitution and By-laws or plan of organization, the Code of Ethics, and the roll of members who attended the recent meeting in Washington. These matters have left but little room for anything else in this number. The title page and index, though stitched in the middle of the number, are so folded that the binder can readily remove them to the proper place whenever the volume is placed in his hands for binding. Each member of the Association now finds himself in possession of two large volumes, containing in addition to all the papers and other matter, that formerly filled the annual volume of transactions, a large variety of important papers read to other medical organizations; a considerable number of valuable original contributions accompanied by many well executed illustrations; a rich summary of "Medical Progress" culled from the most complete collection of medical literature to be found in any country; and a great variety of editorial and miscellaneous items of more or less special interest to members of the Association. And he has received all this in weekly instalments, when fresh, and as fast as his time would allow him to read it, instead of about one-sixth as much matter in a single volume at the end of a year after it had been written. It is presumed that the number of members who would wish the Association to return to the former method of publication is very small. That there are many imperfections in the work of the past year is freely admitted. Yet we are willing that the numbers issued during the last three or four months should be compared, in reference to all that relates to style of publication, with the best weekly medical publications in this country. An occasional typographical error is common to all periodical publications.

It is not many months since the *New York Medical Journal*, certainly one of the most correct usually, had something less than half a column of corections of typographical errors that had occurred in the publication of a single lecture. And within the last three weeks the *Record*, whose editor is so fond of criticising others, represented Dr. Alfred Stillé as resigning the Chair of Theory and Practice of Medicine in the *Jefferson Medical College*, and Dr. William Pepper as having been appointed his successor, at least, so says our correspondent at Tecumseh. Had either of these blunders occurred in this JOURNAL or any other outside of "one of the great *eastern* cities," it would have been held up as a sample of incompetent provincial work for the next six months. We do not allude to this, however, in deprecation of any just criticism. On the contrary, every wise man profits by the criticisms bestowed upon his work whether friendly or unfriendly. Having passed the ordeal of the initial year, and ascertained more definitely both our defects and our resources, we shall enter upon the second year more perfectly prepared to remedy the first, and by so using the second as to command a much greater amount of editorial assistance, make the JOURNAL in the future fully equal to the reasonable expectations of its patrons.

ÆTIOLOGY OF PHTHISIS.—At the conclusion of a lecture delivered at the Royal College of Physicians, London, by Dr. J. Andrews, physician to St. Bartholomews, upon the contagiousness of phthisis, he presents a brief summary in the following words as found in the London *Lancet* for May 10, 1884:

"Finally, allow me to recapitulate the conclusions which I have endeavored to establish as to the ætiology of phthisis with special reference to its contagiousness. None can be more sensible than myself of the many imperfections in the matter and form of my argument.

1. The historico-geographical argument is insufficient to prove that the present distribution of phthisis has been brought about by the carriage along lines of human intercourse of a special morbific germ. Indeed, many of the facts under this head are distinctly antagonistic to any such theory.

2. Before the discovery of the bacillus, one and all of the reputed causes of phthisis were inadequate to account for its distribution, or for the anatomical and clinical characters of the disease.

3. That these causes, even those among them which appeared to act as exciting causes, were all predisposing causes only.

4. That from the nature of these predisposing causes, their relation to each other, and the conditions under which their influence seemed to make itself felt, it was a probable inference that phthisis belonged to the group of specific febrile diseases, and that this view was held by some writers in the face of many difficulties and perplexities.

5. That the facts on which this inference was based were insufficient to prove that phthisis was personally contagious, and were indeed rather opposed to any such notion.

6. That the discovery of the bacillus proved that phthisis was a specific febrile disease, and thus the question of contagion cannot now be usefully discussed without acknowledging this fact.

7. That as some specific febrile diseases are contagious, and others not so, this property existing in very different degrees and modes in different members of the group, the question as to the contagiousness of phthisis can only be satisfactorily answered by direct evidence of its contagiousness and by determining its affinities with other members of the group.

8. That although phthisis may be undoubtedly produced in many ways experimentally in animals and also probably in man, there is not sufficient evidence to prove that its prevalence is materially affected by direct contagion.

9. That in many most important respects it very closely resembles ague.

10. That it is at least highly probable that the exciting cause of phthisis, like that of ague, be it the bacillus or some other micro-organism, is in no way dependent upon man for its existence, and is widely diffused, irrespective of human agency.

From these I may be allowed to make one short practical deduction—namely, that the prevention of phthisis, like that of ague, is to be attained by sanitary works, especially by improved ventilation and drainage, and not by isolation. And that for its cure, as we should not send a case of ague to the Pontine Marshes, so, too, it would be wise not to send a case of tubercular disease to any place where the death-rate from phthisis is high among the native population."

The inference announced in the fourth paragraph above, that phthisis belongs to the group of "specific febrile diseases," coupled with the ninth declaration "that in many most important respects it very closely resembles ague," would strike the clinical observer, accustomed to seek for differences as well as analogies in practical work at the bed-side, with surprise if the day of surprises at the announcement of anything in medicine had not passed by.

We had supposed that the group of affections denominated "specific febrile diseases," were universally conceded to be acute affections, characterized by certain febrile phenomena, an approach to a self-limited duration, and certainly destitute of any semblance of propagation by hereditary influence. On the other hand, it is doubtful whether any other disease in the whole catalogue of human ailments is accompanied by more evidences of hereditary influence in its causation than tubercular phthisis, or that more frequently develops through its early stages without febrile phenomena, without the least approach to definiteness of duration, and not untrequently the tubercular developments in various tissues so latent as to create no suspicion of their existence until revealed by a postmortem examination. If the presence of a bacillus in phthisis constitutes it a specific febrile disease, and justifies its being put into the same group with ague, we might as well at once include in that one group, all the affections to which the human race are liable. For, so far as examinations have been made, we have found none in which the presence of some variety of organic germ or microbe was not present during some part of the progress of the disease.

Vaccination as a Preventive of Hydrophobia and Yellow Fever.—While M. Pasteur claims to have more than twenty dogs which he has rendered no longer susceptible to attacks of hydrophobia by inoculating them with the virus of that disease, after it had been attenuated or diluted by passing through several monkeys and rabbits; Dr. Domingo Freire, of Rio Janeiro, claims to have discovered the specific virus of yellow fever, and after inoculating some of the lower animals with it, he had used the diluted virus for vaccinating several hundred persons, and rendering them unsusceptible to the fever. Dr. Freire represents the specific virus or cause of yellow fever to be a vegetable parasite, which he has named cryptococcus xanthogenius. By what processes his discovery was made we are not yet informed; neither have we sufficient knowledge of the tests to which the 400 inoculated persons have been subjected, to establish our faith in the reliability of the claims, so confidently expressed.

A Diploma by Mandamus.—The Woman's Medical College in New York is represented to have granted a diploma to one of its recent candidates under a threat of mandamus from some court, after the candidate had first been rejected. It was claimed

on the part of the candidate and her legal advisers, that the examinations for degrees being in writing, and the written answers of the candidate being sufficiently correct, the authorities of the college had no right to reject the candidate on other grounds. The same legal threats were persistently made in reference to one of the colleges in this city, a few years since, but not with the same effect upon the Faculty and Trustees of the College.

EPIDEMIC CHOLERA.—A telegram from Paris on the 23d inst. announces the outbreak of this dreaded scourge in Toulon, France, where twenty deaths are reported to have occurred in one day.

The soldiers have been removed from the barracks, active sanitary measures adopted, and rigid quarantine established in every direction. As usual, the disease commenced in the old, filthy part of the city, in the midst of the most unsanitary local conditions.

SOCIETY PROCEEDINGS.

CHICAGO MEDICAL SOCIETY.

Regular meeting May 19, 1884.

Exhibition of specimens of a monolocular ovarian cyst, weight 24 pounds; and uterine myoma, weight 35 pounds; in each of which there was recovery after the operation. The first case was presented by Dr. Charles T. Parkes, and was a most perfect specimen of a large single ovarian cyst, removed from a girl aged 19, four days previously, at one of the hospitals of the city. His remarks, verbally, were that she had been troubled during the past three years with increasing abdominal distension, and had been treated by a number of physicians during the first two years and a half for dropsy, when six months ago the patient was directed to him, and a diagnosis of monolocular ovarian cyst was made. It continued to gradually increase in size until the circumference of the abdomen measured 44 inches. She enjoyed good health, and there were no symptoms of inconvenience especially worth relating. Upon palpation and percussing the tumor, a simple wave was quite perceptible, nor were there present any symptoms of its being polycystic in character, or that there would be found many adhesions. The operation was, therefore, extremely simple. An incision 3½ inches long, sufficient to admit three fingers in the opening, was made, the tumor tapped, and 23 pounds of fluid were drawn from it. There was a very broad pedicle, which is characteristic of this form of ovarian cyst. There were no adhesions, either to intestines or omentum. The speaker here exhibited the sac to the members. When emptied it weighed just one pound. Inflated with air, it showed no corrugations, and, as above stated, was of the most perfectly developed character. There was but slight hæmorrhage from its removal; this was controlled with double ligatures. Since the operation, at no time has the temperature of the patient risen above 99⅕° F., pulse 100, and at this time these conditions are normal, and the young lady bids fair for an auspicious convalescence.

Dr. E. C. Dudley then recited, also verbally, the history of a case that is both rare and interesting, of which the following report is appended: The patient was a Norwegian woman, aged 48, a domestic, and had never been married, nor had she ever become enciente; and two years ago last fall her menstrual periods ceased. On the afternoon of the 17th day of March of the present year, the operation for the removal of this enormous mass was performed by Dr. Dudley. When he first saw the patient, upon examination it was supposed to be a large fibroid with extensive adhesions. The tumor developed in the left side of the pelvis, and of course there was no tympanitis on that side. There was a line of resonance, however, over the transverse colon, extending eight or nine inches. The cervix uteri could scarcely be reached per vaginam, and no outline of the vaginal portion of the cervix could be perceived, and by manual examination and other means a hard tumor of unusual dimensions could be outlined. His prognosis was fatal without operation, and with hardly a hope of recovery if operated upon. The patient went away, and in a few days returned to inquire if the operation was surely a fatal one. Answered no, not positively fatal, but was the only possible chance of prolonging her life much longer. Again she took her departure, and the third time called to consult him. The same advice was repeated, but more cautiously, for she had become more anæmic, and almost cadaveric in appearance from emaciation, dyspnœa, gastric disturbance, etc. It was decided to perform the operation with the able assistance of Drs. R. N. Isham, C. Fenger, W. W. Jaggard, W. P. Verity, George Isham, and a medical student.

Before doing so, however, the patient was handled for two days with the greatest care preparatory to the great ordeal in which she was about to enter. Having during this time had two Turkish baths, the room divested of every particle of furniture; the carpets, curtains and all else were removed. The ceiling and walls were calcimined, wood-work cleaned, and the room was subjected to fumes of burning sulphur for twenty-four hours, and everything about the surroundings thoroughly disinfected, her abdomen had been freely abluted with dilute solutions of corrosive sublimate. The hair over the pubes and vulva was shaved, and every possible care to avoid infection by scrupulous cleanliness was thoroughly attended to. The ligatures to be used were boiled in 95 per cent. carbolic acid for ten minutes, and then in a 5 per cent. solution for half an hour. All instruments were subjected to the flame and then carbolized. The operators and all hands assisting were washed in carbolized water, and we began by anæsthetizing our patient (ether being used.) An incision from the

umbilicus upwards to within two inches of the ensiform cartilage was then made, this being eighteen inches in length. The reason the incision was thus made (upwards) was because it was supposed the bladder was attached to the tumor, which event was subsequently disclosed as the bladder was drawn up to the umbilicus, and had the incision been made downwards, this organ would surely have been incised, as it was found to be adherent over the anterior surface of the tumor. Even as it was, the urachus was cut and opened, and this was followed by a spirt of urine. A large bundle of vessels was also cut into, which very much resembled intestine; these, however, were with some difficulty safely ligated. As stated above, the tumor sprung from the left side of the uterus, and there it had developed to the enormous size here exhibited. The broad ligament was involved in it, and the surface cut away, as was shown by the specimen, is equal fully to a square foot in diameter in all directions. The enucleation was singularly easy. The posterior surface was adherent to the peritonæum which was very firmly attached. The bladder, however, was easily peeled off. Having advanced this far with the operation which required fully an hour and a half before the pedicle was secured, which was done by an elastic ligature, consisting of a solid rubber cord one-fourth of an inch in diameter and placed four times around it, thus the tumor was isolated or secured and severed, which upon all sides is not less than one foot in diameter. Then another tumor at least the size of a fœtal skull filled the pelvis minor. This lesser tumor originated from the posterior wall of the uterus, and it is singular that the functions of the rectum and bladder had not been more seriously interfered with. The smaller tumor also required a ligature, and the same kind exactly was utilized as was used for the larger tumor, but the tumor was only the size of the closed fist. The large tumor was exceedingly vascular. Esmarch's bandage was first applied to this, but it slipped off. This was found to be impracticable, and as a matter of course, much valuable time was lost in essaying to do this. The patient was to all appearances nearer dead than alive, but the operation was as yet not completed, as a considerable portion of the larger tumor remained. This portion of it was also of considerable size which (was then shown) the operator being pleased to call it a shaving. This mass was as large as the two hands placed beside each other and was correspondingly thick, being two to three inches in thickness over its entire extent. A clamp and two drainage-tubes were then introduced, while the parts were cleansed very carefully with antiseptic solutions of weak carbolized water, and the minor details, such as closure of the wound and the parts carefully adjusted, were thoroughly attended to. His patient was placed in bed with pulse scarcely perceptible, and the operation was declared complete. She rallied from the shock, and for the first eight days she was conscious. Her temperature during this time ranged from 98° to 101° F., and the pulse 100 to 120. There was considerable flatus which passed downwards. All of these symptoms were regarded as being favorable to the patient. On the ninth day her temperature rose to 102° morning and evening 103°., and the pulse became correspondingly accelerated. On the eleventh and twelfth days her temperature rose to 104½°, and her pulse and respiration kept an even pace, having become alarmingly increased.

In consultation with Dr. R. Tilley and Dr. C. Fenger, we carefully examined the lower portion of her abdomen, and discovered pus forming. The former gentlemen administered ether again, and this pus cavity was explored, and fully one-half pint of fœtid pus was evacuated by an opening through the uterus.

A drainage-tube was passed into Douglas' cul-de-sac through the opening thus made, and the cavity of this abscess below the pelvic organs was washed out with weak solutions of carbolic acid. Through the counter-opening thus made a large quantity of matter was discharged during the succeeding few days. During the next two days her temperature fell to 101°, with pulse of 100, and no chills. She continued to remain about in this condition, with a temperature of 100° to 101°, until the 27th day, when one of the drainage-tubes through this last opening was removed, and also the lesser ligature, or the smaller rubber cord. At this procedure her temperature advanced a little. There was but little absorption of the ligature (which was shown to the Society). On the 37th day after the operation, the large double ligature consisting of the rubber cord was removed, and a considerable sloughing mass came away with it. After four days more, the drainage-tube was withdrawn from the cul-de-sac, and this opening into the womb and vagina closed spontaneously. Through this, the operator stated, a very large amount of pus had discharged, and the patient continued to improve until the 17th of the present month, *i. e.*, 60 days after the operation. Her temperature then arose to 101°, or perhaps a little above this point. Being hastily summoned to see her, the cause assigned for this state of affairs was, that the patient injudiciously exposed herself to a draft of air the day previously by arising from her bed and sitting at the open window for some moments. The next day her temperature had risen to 102°, accompanied by considerable fever. However, under suitable measures, this evening, which is the 63rd day after the operation, all her symptoms have again improved, and there can be no doubt as to her final recovery. Throughout the entire treatment of the wound, it was dressed with iodoform insufflations, and the drainage-tubes were at all times carbolized. Of late she has taken a large amount of food three times a day. There is no pallor in her face and lips, she has greatly increased in flesh, and she sleeps well.

This case illustrates a few things: first, that any amount of operating in the pelvic cavity of a patient may be done and recovery ensue; also that this variety of tumor may be removed as safely as it was formerly supposed an ovarian cyst could be. That in operations in the abdominal cavity, hæmorrhage is the chief source of danger, although sepsis through the uterus is another danger that we must well look after. Again, regarding ligatures; a silver

or silk ligature shrinks. Rubber cords doubled twice, as explained above, were employed in this case, and their contractile force proved advantageous. Other complications may arise. The operator stated that in the foregoing case, the patient had diarrhœa and a very sore mouth at one time.

In the discussion regarding diagnosis of these tumors, and also to differentiate them from other varieties, Dr. Parkes stated this to be a difficult question for doctors to consider. No exact set of rules can be given for this, except to investigate what we have to deal with by cutting into it. The symptom of difference is wide between myoma and ovarian tumors, of either monocystic or polycystic variety; but much difficulty may arise in our attempting to decide which variety of the latter we may have. The uterine sound, percussion, palpation, history of case, etc., will enable us to differentiate these growths, unless two or more varieties are blended together. As to an ovarian cyst of moderate size, and a multiple fibroma, he thought we could pretty accurately decide which we have before us to deal with.

Multiple fibromæ are difficult to remove. He had operated three times for this variety, and all the cases had died. Yet a physician is justified in advising an operation for their removal, and the chances of recovery are as good as when ovariotomy was performed years ago. Regarding his cases, one of the tumors removed weighed forty-two pounds. This patient lived five days after its removal and then died of exhaustion. In the other cases he operated upon, there were many fibroids, all of which were removed, but the cases later proved fatal. Dr. Dudley's case was extremely interesting, from its vast size, and the many other points he mentioned. There is no doubt about the pedicle as being an item of great interest in these cases, and should be secured by the extra peritoneal method as Dr. Dudley had done. This fastening of the pedicle outside is the only safe way to secure it, and not by the intra-peritoneal method. The case to which we have all listened with so much interest, will go on record as one of the many great operations of abdominal surgery (followed by success) that have been performed in the United States.

Dr. J. R. Flood spoke of the great interest centered in this case of "Uterine Fibromæ," and that it was certainly a triumph considering the magnitude of the specimen lying on the table.

Dr. G. H. Randall inquired if it would have been practicable to remove the uterus in the case cited here.

Dr. R. Tilley could bear testimony to the extensive adhesions and extreme emaciation in the case of uterine myoma; also that at the time of the evacuation of pus, he thinks that at least a pint or a pint and a half was discharged within three to five minutes, and that Dr. Dudley had so much under-estimated the quantity that he felt justified in making the correction.

Dr. L. H. Montgomery inquired of the operator: How much of the incision of eighteen inches in length yet remained open? He also presumed that when this was made, that it did not contract, as in cases of ovarian cystic tumors, which could be tapped and the fluid withdrawn, and where the incision would be much less in length. This gentleman thought both these cases reported were of so great interest, that inasmuch as the annual meeting of the Illinois State Medical Society was to be held in the city during the week, that each of them be requested to present the specimens before that Society. He thought these cases should both go on record, and that Dr. Dudley, especially, should have had his written; but that the oral report which he has given embraced undoubtedly the main points of his case.

Dr. J. H. Etheridge inquired what the depth of the uterine cavity was before the operation?

Dr. Dudley closed the discussion by first replying to the interrogatories propounded. Regarding the the depth of the uterus. This was nearly normal. It being only about three inches. Regarding the opening at this date, it has united along its entire length, except a small space only sufficiently large to admit the tip of his little finger; and further, as one speaker has stated, the incision was 18 inches long at first, and did not contract as if the removal had been an ovarian cyst.

Extra-peritoneal treatment is sometimes quite impossible to carry out. In his case nature had assisted in changing the intra-peritoneal treatment of the pedicle to extra-peritoneal, which saved the woman. One thing he omitted to mention in the treatment of this case. It was that a portion of the time it was necessary to insert disinfectant sponges in the cavity, and at one time these were soaked in weak solutions of corrosive sublimate. Perhaps only 1 part to 20,000 of water, which is said to be sufficient to destroy germs.

Upon motion of Dr. J. F. Williams, duly seconded, the authors of the cases reported this evening, were requested to present their cases before the Illinois State Society.

On motion the Society adjourned until the second Monday of June. L. H. M.

SUFFOLK DISTRICT MEDICAL SOCIETY.

SECTION FOR CLINICAL MEDICINE, PATHOLOGY, AND HYGIENE.

ALBERT N. BLODGETT, M.D., SECRETARY.

April 9, 1884. Meeting called to order at eight o'clock, Dr. R. T. Edes, Chairman, presiding. A summary of the records of the last meeting was presented by the Secretary.

Dr. F. I. Knight read a paper on the Laryngeal Complications of Pulmonary Phthisis, dwelling especially on those which are considered almost pathognomonic, that is, those of infiltration or ulceration, or both these processes combined. He described at some length the laryngoscopic appearances of these lesions, and said that while they usually followed the pulmonary disease in order of development, they probably preceded it in exceptional cases. The diagnosis was usually not difficult, but in doubtful cases anti-syphilitic treatment should be tried.

The prognosis was undoubtedly bad, but in some cases the laryngeal manifestation entirely disappeared. These cases afford a strong argument against the universal theory of tubercular infiltration.

In regard to treatment Dr. Knight said that a mild climate, or even a warm, moist one, seems to suit these cases better than the cold, dry air of high elevations, which was so beneficial to cases of incipient disease of the lungs alone. Semi-solid food, taken cold, as a rule, suits best.

Judicious local treatment not only makes the patient infinitely more comfortable, but also in certain cases apparently brings about an arrest of the local disease.

The old plan of cauterizing these ulcerations was bad. The whole local treatment of tissues so feebly nourished should be very gentle. In the first place, the mucous membrane should be kept as clean as possible by the use of alkaline sprays. Weak astringents may be added or used afterward. Carbolic acid in weak solution and iodoform do good in some cases. When there is much congestion and swelling, the frequent use of finely-powdered ice was advised. Scarification does no good, but rather harm, unless there is a translucent œdema. Cutting into a small-celled infiltration only makes troublesome cicatrices. The careful passage of bougies into the œsophagus sometimes gives relief, by producing absorption or diminishing the great irritability of the mucous membrane. Morphia powders, combined with sugar or starch, blown into the throat an hour before the principal meal, often gives great ease in deglutition. Mild vapors of volatile substances like the oil of pine, may be very grateful.

Tracheotomy may be necessary to avert asphyxia, but experience has not sustained the theory that cure of the laryngeal disease is facilitated by the rest to the organ secured by an earlier performance of this operation. Brushes, sponges, and all rough methods of making applications to the larynx should be, as a rule, avoided in this disease.

Dr. Cushing stated that he had very little to add in the way of therapeutics to the admirable suggestions contained in Dr. Knight's paper. A consideration of the pathological condition of the tissues surrounding tubercular ulcers, crowded with imperfectly-developed small cells, was sufficient to make any attempt at healing them hopeless. In hospital out-patient practice, and where the smell of iodoform was not objected to, he had found the insufflation of that substance, powdered and mixed with one-half its bulk of gum arabic, to be of great relief. The friends of the patient could easily learn to blow it on to the larynx without any mirror, for if a curved powder-blower were steered beyond the epiglottis, it was easy to diffuse the powder with tolerable accuracy over the diseased surfaces, and even in time the patient could learn to receive it in inspiration, so that a part would come into the trachea, which was often inflamed and ulcerated.

A mixture of morphine in glycerine made pretty strong, so that 10 drops would be a dose, and this applied with a spoon to the back of the tongue, and allowed to trickle down over the larynx, frequently gives great relief.

Dr. Cushing had little respect for the operation of tracheotomy as a means merely of prolonging life in these cases, believing that when bad enough to cause death, it was a kindness not to interfere in such hopeless cases; something might at times be said for the operation when required for relief of pain.

Dr. Cushing, by request, exhibited some of his microscopical preparations of tubercular larynges, showing how the small cells are first deposited along the tracks and at the forks of the smallest vessels; then the swollen mucous membrane of the infiltrated larynx was shown crowded with small cells, which in the neighborhood of the ulcers were so thick that no other tissue was discernible. At the edges of the ulcers it could be easily seen that the agglomeration of small cells had rendered the part incapable of self-support, and that increasing numbers when newly formed must swim off as pus, or keep together as best they could in granulations or badly-nourished vegetations, the origin of some of which was demonstrated. Some sections of the trachea showed a precisely similar process there; the nutritive support of parts of the cartilage of the rings being cut off, the part dies, and is finally thrown off, leaving a deep "punched" ulcer, more or less covered with weak granulations.

Dr. Cushing during his remarks spoke of the fact that cases of tubercular disease of the larynx frequently occur when the most careful examination can find no disease of the lungs until long afterward, and although theoretically it has been maintained that such trouble in the larynx must be secondary to disease in the lungs or cheesy deposits elsewhere, yet practically the throat symptoms are often sufficiently pathognomonic when no disease of the lungs can be detected, and thus constitutional treatment can be commenced or change of climate advised at an early date of the disease, although with poor chance of success. He suggested that, according to modern theories, such cases of apparently primary laryngeal tuberculosis might easily be such in reality, being caused by direct infection from particles or bacilli in the air inspired.

Dr. Hooper remarked that he had been much interested in the paper, and agreed with the reader in the importance of always obtaining confirmatory evidence of disease in the lungs, and a careful history of the patient, before making a diagnosis of laryngeal phthisis. We meet with the diseases in the larynx in more than one variety, and the appearances are so different in the different stages of each variety, that a positive diagnosis cannot be made without undoubted signs of chest lesion. In fact, in all the ulcerative processes of the larynx, whether due to syphilis, carcinoma, lupus, or disease of the lungs, a detailed history of the case, and evidence of disease in some other part of the body, is necessary before we can decide upon the exact nature of the destructive process. Even if we followed the plan of Fränkel and others, and, in doubtful cases, wiped off some of the discharges from the interior of the larynx, and found therein the bacilli peculiar to tubercular disease, we would then only be justified in eliminating with cer-

tainty syphilis and carcinoma; but whether we had to do with lupus, tuberculosis, or even leprosy, would still be an open question, unless, as already stated. we discover other manifestations of one of these tubercular diseases in a different region of the body.

With regard to the question as to tuberculosis occurring primarily in the larynx, Dr. Hooper thought that any one who accepted Koch's discoveries must believe that such could be the case. If the disease in the larynx arises from the presence of the tubercle-bacillus in the sputum coming from the lung, why should not the same specific parasite, when inhaled, produce tuberculization of the tissues, provided always, of course, that the laryngeal mucous membrane is in a proper condition to receive it, and there is an hereditary predisposition on the part of the individual.

In respect to treatment, Dr. Hooper had nothing to add to what had already been said, but was of the opinion that tracheotomy, in certain exquisitely painful cases, might afford relief by keeping the larynx at rest. The operation offers no hope of cure or of prolonging life, but only affords temporary relief from distress.

Dr. T. A. DeBlois said that often a great amount of comfort may be derived from scarifying the ary-epiglottic folds in those cases which are accompanied by much swelling, so that the epiglottis cannot properly close, and the patient is constantly choking from particles of food or drink which enter the air-passages with each act of deglutition. He has never seen any undesirable result follow this procedure. He never has observed ulceration of the cicatrix in these cases. In two cases he has seen laryngeal ulcerations heal under the use of iodoform, but in each case they broke down again after a few weeks. In one case in which the patient had been able to take no solid food for months, by the use of iodoform he was able to resume solid food for another full month. No other known form of treatment has ever accomplished more favorable results.

Dr. DeBlois showed an improved form of powder-blower for laryngological purposes.

Dr. W. J. Otis showed a powder-blower of a pattern originally brought from Vienna, but upon which he had adapted improvements which facilitated its manipulation and added to its usefulness.

In connection with the use of iodoform in tuberculosis of the larynx, Dr. E. W. Warren stated that he was working in Schrötter's wards in Vienna at the time when this became the regular treatment. Before this about one-fourth of a grain of morphia was blown in. The improvement was very marked, and though not recalling that he saw any ulcers entirely heal, there was great diminution of infiltration, and the pain was less than under the morphia.

Dr. J. W. Farlow remarked that he had seen laryngeal ulcers heal, at least temporarily, in dispensary practice under the use of iodoform. A gain of six or eight weeks is a great thing to these poor patients. Often the larynx is diseased for a considerable time before any disease of the lungs can be detected.

Dr. Bowditch agreed with the general tenor of the remarks of Dr. Knight upon the very great value of topical applications in diseases of the larynx, whether connected or not with pulmonary complications. But Dr Bowditch could not wholly condemn the use of the nitrate of silver as injurious in these cases. It is well known that the late Dr. Horace Green, of New York, published nearly forty years ago a volume[1] the object of which was to convince the medical profession that nitrate of silver applied at times in a strength of thirty to forty, or even eighty grains to the ounce of water, might be applied not only without danger to the larynx, but at times with great relief and final cure in some of the most obstinate and long-continued cases of "laryngeal disease." Dr. Green also applied the solid caustic to specially enlarged follicles in the throat. Dr. Bowditch, however, had gradually given up the nitrate of silver for the liquor iodinii compositus, as the latter seems more agreeable to the patient and is equally efficient. Dr. Bowditch, moreover, without employing the laryngoscope, for his powers of sight prevented it, had always used a fine camel's hair brush. With this he was sure that he could touch the vocal cords, often without the least choking. He knew so because the voice improved *immediately* in certain acute cases, and patients were cured after a certain number of such applications, made usually three times a week, and gargling with alkaline or other fluids three times daily. Dr. Bowditch found all spraying and powder-blowing objectionable, because of the choking that is often produced by them. Moreover, an expensive apparatus is needed, whereas the brush is a simple apparatus, which every general practitioner can and ought to have.

There is, however, some art needed in making the application. One case that happened soon after commencing the course of topical applications, had taught Dr. Bowditch that the operator must always be sure that the patient has *drawn a full breath, and is about to expire.* Let the cords be touched *at that moment* and no spasm will occur. Let, on the contrary, the touch be made at the instant of inspiration, and violent results may occur. In the case above alluded to, and in which this blunder was committed, the patient threw himself upon the floor, and for a time *seemed* choking. No evil resulted, but a very great discomfort, which latter should be avoided if possible. In addition to the above rules, Dr. Bowditch is accustomed, before treating the larynx, to make an application to each tonsil and to the back of the throat, allowing the patient to breathe in the intervals. In this way the patient will be gradually led to believe that the final operation will be equally slight. It usually causes *no trouble*, except heat in the parts, although the patient feels that the operator has "touched the spot." Often a clearer voice and ease in speaking will be apparent in a few minutes.

Dr. Bowditch would dwell upon the various points in this simple operation, because each one is important for the *comfortable* performance of it.

Any discussion of the subject of laryngeal phthisis, brings up a great number of important questions:

[1] A Treatise on Diseases of the Air Passages. . . . Chronic Laryngitis, Clergyman's Sore Throat, etc. New York and London: Wiley & Putnam. 1846.

What do we know about tubercle at present? How may we recognize tubercular from other forms of ulceration? Each of these single topics would form an inexhaustible subject of investigation and discussion.

Dr. Knight thought that Dr. Bowditch's method of applying medicines was a very good one, and would undoubtedly be a safe one to follow. There can be little doubt that tuberculous ulcers may sometimes heal, and the enormous swelling and other symptoms may quite disappear. Unquestionably this conduces greatly to the patient's comfort for a part, and frequently for the whole remaining period of life. In regard to the possible arrest of the laryngeal disease, three remarkable cases came to his mind at the minute. In all three the swelling of the cartilages was very great, the ulceration well marked, and the dysphagia distressing. There were positive signs of pulmonary disease in the first two, but not in the third. The swelling and ulceration almost entirely disappeared, and deglutition was relieved in the first two, but the patients died, one with symptoms of meningeal tuberculosis. In the third, the signs and symptoms disappeared, with the exception of slight swelling of the epiglottis, and slight loss of substance in one vocal cord, and the patient has remained well, without any tubercular symptoms in larynx or lungs, for a year.

Dr. J. V. Mott, of New York, asked the reader if he had observed the effect of iodide of potassium internally in laryngeal phthisis? To which Dr. Knight replied that he had seen no beneficial result from its employment, except in mixed cases, or those which were undoubtedly syphilitic.

Dr. Mott remarked that this medicine was much used in the Metropolitan Hospital, in New York, but the character of the cases is often very difficult to determine, as syphilis is frequently present.

In reply to a question as to the utility of general treatment, and the results to the patients, Dr. Knight replied that hygienic and other appropriate methods of treatment should be diligently pursued in all these cases. The value of topical applications is much enhanced by a generally invigorating treatment for the whole system.

DOMESTIC CORRESPONDENCE.

DR. N. S. DAVIS:

Dear Sir:—The second section of the Report of the Judicial Council of the American Medical Association, at its late meeting, announced that some facts had come to its knowledge rendering it probable that the Cuyahoga County Medical Society had been derelict, in not requiring its members to observe the Code of Ethics.

At the next meeting of the Society after the report was made public in the Association JOURNAL, the committee now addressing you was chosen to present to the Council, through the pages of the JOURNAL, an epitome of the Society's course in connection with the instances of the violation of the Code which have of late been acted upon by it, and which it is supposed have supplied the facts referred to in the Council's report.

The Society numbers some eighty members, and it is not surprising that it should at times have to act upon violations of the Code of more or less gravity.

These cases often involve delicate, embarrassing, and responsible features; and it is not always easy to determine what is just to all concerned, or to satisfy all concerned.

The Society took patient and mature action upon these cases, and while summary excision was not adopted, such a course was taken as seemed probable in brief time to lead those who had infringed on the Code, into full accord with its ethical requirements, expressed and implied. If this had not speedily proved true, decided action would have followed. The Society is and has been loyal to the Code, and naturally feels the Council's animadversion, so publicly dealt. We are confident this would not have occurred if the full history of the questioned cases, with the Society's action thereon, had been appreciated. We do not know what we ought to do. If specific charges had been made, we could reply. We can perhaps do no better than to ask that this outline of our position be published in the JOURNAL, pending the next meeting of the Judicial Council, when the full facts will be respectfully placed before it.

Very respectfully submitted,

H. K. CUSHING, M.D.,
E. D. BURTON, M.D.,
H. H. POWELL, M.D.,
A. S. HART, M.D.,
A. B. CARPENTER, M.D.,
L. B. TUCKERMAN, M.D.,
} Committee.

Per L. B. TUCKERMAN, Cor. Sec.

Cleveland, O., June 11, 1884.

NECROLOGY.

DUNGAN, DAVID H., M.D., of Little Rock, Ark., was born in Maury County, Tennessee, on the 11th day of March, A. D. 1839, died in said city on April 16, 1883.

In the year 1856 he went to Chester, South Carolina, and studied medicine under A. P. Wylie, who was a physician of considerable distinction. He attended his first course of lectures in the Medical Department of the Nashville University in the years 1858 and 1859. From Nashville he went to the University of Pennsylvania, where he graduated M.D. in the year 1861. He located at Thompson's Station, Tenn., in April of the same year. In the month of July ensuing, he entered the confederate army as a private. Soon afterwards, however, he was appointed assistant-surgeon in the second battalion of Tennessee Cavalry, and in October of the same year he went into the Anderson Hospital at Nashville. When the army retreated from Nashville, he was ordered to Chattanooga, Tenn., establishing a hospital there,

and maintaining it about two months. In March of the following year, he sent his patients to Atlanta, Ga., and reported to Gen. Albert Sidney Johnson for duty. After the battle of Corinth, Miss., he was assigned to duty as surgeon of the First Tennessee Regiment of Cavalry, in which capacity he remained till the close of the war. The regiment to which he belonged participated in the battles of Corinth, Chicamauga, Holly Springs, and many others. After the war closed he returned to Thompson's Station, Tenn. He remained there about five years, and in the year 1870 he removed to Little Rock, Ark., and remained there until the time of his death.

As a surgeon, he was possessed of skill, courage and talent, and performed many important operations with success. But a short time prior to his death, he performed tracheotomy on a child, removing a foreign body with success. He was honored with the Presidency of the Little Rock and Pulaski Society, was a member of the State Society of Arkansas, and of the American Medical Association, also of the American Public Health Association, and of the Sanitary Council of the Mississippi Valley. For a number of years he was a member of the Little Rock Board of Health, and was ever active and efficient as such member.

The subject of this sketch was married twice. Miss Alice Thompson, of Thompson's Station, Tenn., was his first consort. His second wife was Mrs. M. M. Lefevre, of Little Rock. He was a man of strong will-power, and when he espoused a course, his strong and earnest advocacy of its claims sometimes subjected him to the charge of stubbornness. His amiable qualities in other respects, however, went far to neutralize any defects in his useful life and valuable character.

H. H. TURNER, M.D., of Arkansas.

MEAD, EDWARD, M.D., was born in England, in 1819; died June 28, 1883, being shipwrecked on the coast of Pico while making a voyage in the Portuguese barque Pimpao to the Azores for recreation and health. Dr. Mead studied medicine early in life, graduating from the Medical College of Ohio, in 1841. He made mental diseases a specialty, was a devoted believer in his profession, and successfully conducted a private asylum in Chicago, Illinois, from 1842 to 1852, removing in the latter year to Cincinnati, Ohio, where he resided till 1869. He held for a time a professorship in the Illinois Medical College, and later a similar one in the Cincinnati College of Medicine and Surgery. At Cincinnati he filled several public positions, and during the civil war he was an active member of the Sanitary Commission. He came to Boston, Mass., in 1870, and established a private institution two years later. Dr. Mead was a member of the American Medical Association; of the Massachusetts Medical Society, and at the time of his death was one of the Councilors of the Norfolk District Medical Society.

RANNEY, MARK, M.D. Prominent among the medical men of Iowa, will stand the name of Dr. Ranney, the able Superintendent of the Hospital for the Insane at Mt. Pleasant. Of medium height, keen intellect, and a somewhat emphatic bearing, his life was active and efficient; more thoroughly appreciated by those who knew him best. Though not in robust health, to all appearances he had many years before him when suddenly claimed by death.

Dr. Ranney was born in Westminster, Windham Co., Vt., July 7, 1827. Having received an academic education, he entered Vermont Medical College, Woodstock, graduating therefrom in June, 1849. Immediately upon his graduation he was appointed Assistant Physician to the Butler Hospital for the Insane, Providence, R. I., where he remained five years under the direction of the distinguished Dr. Isaac Roy. In 1854 he was appointed to the same position in the McLean Asylum, Somerville, Mass., then in charge of the scarcely less distinguished Dr. Luther V. Bell. Here he remained until 1865, when he was elected Superintendent of the Iowa Hospital for the Insane, Mt. Pleasant, Iowa, a position he held continually until his death, save in 1873–75 when he was in charge of the Insane Asylum at Madison, Wis.

Dr. Ranney was an honored member of many medical societies, and for several years was Lecturer on Insanity in the medical department of the Iowa State University. The reports of the Boards of Trustees of the institutions where the doctor spent so many years of valuable life abound in expressions of intelligent appreciation of the character of the services rendered; and the pages of the University records bear unqualified testimony to his ability and worth as a man and teacher. His published works have been papers read before medical societies, and before the Association of Superintendents of Hospitals for the Insane, published in their several transactions.

He married, Oct. 1865, Martha Wright, daughter of Thomas Sawyer, Esq., of Sterling, Mass. He died after an illness of a week, of acute pneumonia, Jan. 31, 1882. S. B. CHASE.

Osage, Iowa.

SAWYER, EDWARD J., M.D., was born August 3, 1829, at West Haven, Vermont; died at his residence in Gardner, Mass., May 10, 1883, of pneumonia. He was the son of Rev. R. Sawyer, of Chester, Vt. His early education was received in New London, N. H., and at the Academy in Chester, Vt. He studied medicine with Dr. Lowell, of Chester, Vt., and attended lectures at the Medical School in Castleton, Vt., from which institution he received the degree of M.D., in June, 1853. In August, 1853, he commenced the practice of his profession at Acworth, N. H., but in 1858 he removed to Gardner, Mass., where he spent the remaining years of his life in active practice. Dr. Sawyer, as a physician, was very successful, and was highly esteemed as an intelligent, honorable, and conscientious practitioner. As a citizen he enjoyed the confidence and respect of his fellow-townsmen. As a Christian he was exemplary in his conduct and an honored member of the church. He was appointed examining physician by Gov. Andrew during the civil war;

was for two years president of the Worcester North District Medical Society; member of the State Medical Society, and of the American Medical Association. Dr. Sawyer was a prominent Mason, having received all the degrees in Masonry that can be conferred in this country. J. H. G.

LOWELL, Mass., June 5, 1884.

KEMP, DR. JOHN D., was born in Montgomery County, O., Oct. 19, 1830.

His parents were Isaac Kemp and Margaret (by birth Herring), he being the youngest of five children born to them. Only two, Lewis and Jacob, are now living. He studied medicine with Drs. Oliver and James Crook, graduated at Baltimore Medical College in the year 1856, commenced the practice of medicine in Vandalia, O., in the same year, and continued at the same place for sixteen years—having an extensive practice. He was married in June, 1871, to Miss Harriet A. Holderman, of Emporia, Kansas.

He then in May, 1872, removed to Dayton and resumed his practice. In October of the same year, he was seriously injured by being thrown from his buggy by a fractious horse, from the effects of which he never entirely recovered. In February, 1873, he was unfortunate in the loss of his wife by death, she leaving a babe but three months old who now survives the deceased. His health has been delicate for two years past, and he died April 17, 1884, aged 53 years.

Dr. Kemp represented Montgomery County in the Legislature for two terms, and he was elected for one term to the Senate by the counties of Montgomery and Preble. For several years previous to his death he was a member of the Board of Trustees of the Southern Ohio Association for the Insane, located at Dayton, O. He was an upright, honest man, respected and esteemed by all who knew him.

MISCELLANEOUS.

AMERICAN PUBLIC HEALTH ASSOCIATION.

SECRETARY'S OFFICE,
CONCORD, N. H., JUNE 2, 1884.

At a meeting of the executive Committee, held at the Museum of Hygiene in the city of Washington, May 7, it was decided to hold the Twelfth Annual Session of the Association on Tuesday, Wednesday, Thursday, and Friday, October 14–17, 1884, at St. Louis, Missouri, and to present the following topics for consideration:

1. Hygiene of the Habitations of the Poor.
2. Hygiene of Occupations.
3. School Hygiene.
4. Adulteration of Food.
5. Water Pollution.
6. Disposal of Sewage by Irrigation or Chemical Action.
7. The Observable Effect upon the Public Health of Official Sanitary Supervision.
8. The Work of Municipal and State Boards of Health.

IRVING A. WATSON, *Sec'y.*

OFFICIAL NOTICE.

ANNUAL DUES from members of the Association—*Five Dollars* per annum—are payable directly to the Treasurer. Such payment entitles them to receive the JOURNAL of the Association for one year.

SUBSCRIPTIONS TO THE JOURNAL from those who are not members should be forwarded to the office of publication, Chicago.

BACK VOLUMES OF THE TRANSACTIONS may be procured, at reduced rates, by addressing the Treasurer.

THE INDEX to the 33 Volumes of Transactions will be forwarded, postpaid, on receipt of *One Dollar* by the Treasurer.

According to a resolution passed May 9, 1884, at the Washington meeting, continuous payment of Annual Dues is required, to retain permanent membership.

RICHARD J. DUNGLISON, M.D.,
Treasurer.

Lock Box 1274, Philadelphia, Pa.

BOOK NOTICES.

Noskowski, De S. Étude sur l'Arsenic et en Particulier sur la Valeur de ses Preparations facilement Solubles dans le Traitement Preservatif et Curatif des Malades Tuberculeux. 8vo, 143 pp. Lyon: Pitret aine.

Schmitt, S. De la Phlebite Rhumatismale. 8vo, 109 pp. Paris: Delahage et Lecrosnier.

Talamon, C. La Bacille de Koch au Point de Vue Clinique, apropos de la communication de M. le Professeur G. See, de l'Academie de Medecine. 8vo, 28 pp. Paris: Asselin et Cie.

OFFICIAL LIST OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT UNITED STATES ARMY, FROM JUNE 14, 1884, TO JUNE 20, 1884.

Happersett, J. C. G., Major and Surgeon, granted leave of absence for four months. (Par. 5, S. O. 141, A. G. O., June 18, 1884.)

CHANGES IN DEPARTMENT OF TEXAS.

Porter, J. Y., Captain and Assistant-Surgeon, from Fort Ringgold, Texas, to Fort Brown, Texas, as Post Surgeon.

Maddox, T. J. C, First Lieutenant and Assistant-Surgeon, from Fort Clark, Texas, to Fort Ringgold, Texas, as Post Surgeon.

Black, C. S., First Lieutenant and Assistant-Surgeon, from Fort Concho, Texas, to Fort Clark, Texas.
(S. O. 73, Headquarters Department of Texas, June 9, 1884.)

LIST OF CHANGES IN THE STATIONS OF MEDICAL OFFICERS, U. S. NAVY, FOR THE WEEK ENDING JUNE 21, 1884.

Surgeon J. S. Knight ordered before Retiring Board.

P. A. Surgeon C. G. Herndon, detatched from "Albatross," ordered to attend officers of Navy and Marine Corps in Washington.

Surgeon J. M. Flint, detached from Smithsonian Institute, ordered to Fish Commission Steamer "Albatross."

Assistant-Surgeon P. Leach, ordered for examination preliminary to promotion.

P. A Surgeon J. E. Gardener, detached from U. S. S "Lancaster," ordered to U. S. S. "Powhatan."

P. A Surgeon J. C. Boyd, detached from U. S. S. "Lancaster," ordered to U S. S. "Powhatan."

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THE AMERICAN MEDICAL ASSOCIATION

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Place of meeting, 1885, New Orleans, La.; Time of holding meeting, last Tuesday in April.

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